Year 8 Retention Sheet A5

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{3}{11}+1\frac{3}{5}=$ (b) $1\frac{1}{10}-1\frac{2}{9}=$

(c) $1\frac{2}{3}\times 1\frac{5}{12}=$ (d) $1\frac{7}{11}\div 3\frac{3}{5}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=5, a=0$ & $t=9,$ (b) $u=$ - $2.1, a=6.4$ & $t=7$

3. Expand and Simplify:

(a) $-9(8x-3)=$ (b) $-5+2(9x+4)=$

(c) $8(3x-3)-8(5x-3)=$ (d) $-6x(3x-3)-6(4x+7)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 45:40 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$184$. They divide the money on the ration $3:5$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $7:8:7$ respectively. If she uses $126\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	3
3	4
4	8
5	3

x	Frequency
1	1
2	4
3	4
4	8
5	3

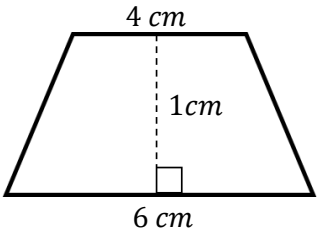
7. Solve:

(a) $-5x-4=16$ (b) $3x+18=-x-5$

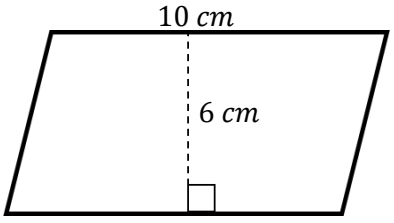
(c) $-3(-4x-2)=-2x+1$ (d) $3(4x+3)=-2(-5x+7)$

8. Find the area of the trapezium and parallelogram.

(a)

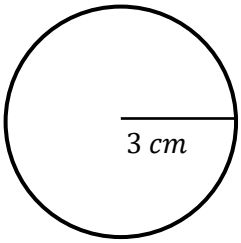


(b)

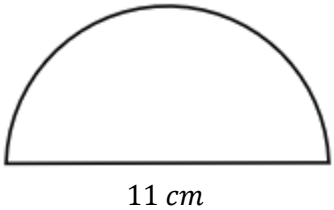


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A5

1. (a) $\frac{158}{55}$ (b) $\frac{-11}{90}$

(c) $\frac{85}{36}$ (d) $\frac{5}{11}$

2. (a) $s = 0$ (b) $s = 143$

3. (a) $-72x + 27$ (b) $18x + 3$

(c) $18x + 3$ (d) $-18x^2 - 6x - 42$

4. (a) See quadrilaterals sheet

5. (a) $45:40$ (b) Bill gets \$69 and Ben gets \$115 (c) $144\ ml$ of apple and $126\ ml$ of pineapple

6. (a) 3.55 (b) 3.40

7. (a) $x = -4$ (b) $x = -23/4$

(c) $x = -5/14$ (d) $x = -23/2$

8. (a) $Area = 5\ cm^2$ (b) $Area = 60cm^2$

9. (a) $C = 18.84\ cm,$ $A = 28.26\ cm^2$ (b) $P = 28.27\ cm,$ $A = 47.49\ cm^2$

Year 8 Retention Sheet A6

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $2\frac{7}{12}+1\frac{4}{11}=$ (b) $1\frac{9}{10}-1\frac{3}{5}=$

(c) $1\frac{8}{9}\times 2\frac{7}{11}=$ (d) $2\frac{5}{11}\div 3\frac{7}{12}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=8, a=4 \,\&\, t=10,$ (b) $u=$ - $5.4, a=9.3 \,\&\, t=5$

3. Expand and Simplify:

(a) $-7(7x+4)=$ (b) $5+4(7x+2)=$

(c) $-3(2x-3)-3(x-3)=$ (d) $8x(2x-8)+8(5x-6)=$

4. Draw a sketch of a **trapezium** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 5:45 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$75$. They divide the money on the ration $3:2$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $3:6:5$ respectively. If she uses $69\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	5
3	4
4	7
5	4

x	Frequency
1	0
2	4
3	4
4	7
5	5

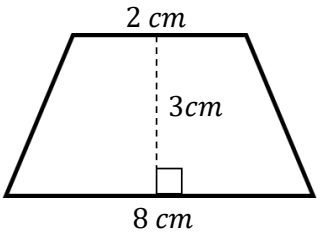
7. Solve:

(a) $-6x-8=-50$ (b) $-4x-19=5x+4$

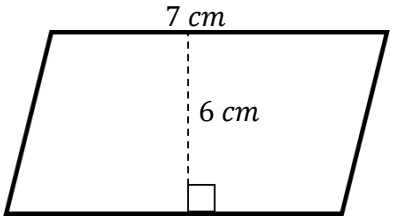
(c) $3(2x-6)=5x+9$ (d) $-(2x+3)=-4(5x-6)$

8. Find the area of the trapezium and parallelogram.

(a)

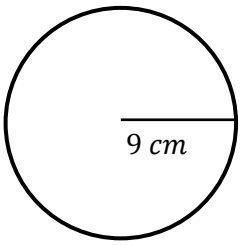


(b)

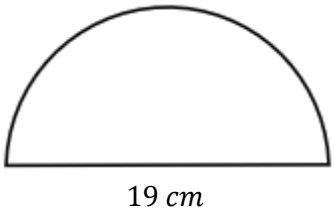


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A6

1. (a) $\frac{521}{132}$ (b) $\frac{3}{10}$

(c) $\frac{493}{99}$ (d) $\frac{324}{473}$

2. (a) $s = 232$ (b) $s = 66$

3. (a) $-49x - 28$ (b) $28x + 13$

(c) $28x + 13$ (d) $16x^2 - 24x - 48$

4. (a) See quadrilaterals sheet

5. (a) $5:45$ (b) Bill gets \$45 and Ben gets \$30 (c) $138\ ml$ of apple and $115\ ml$ of pineapple

6. (a) 3.50 (b) 3.65

7. (a) $x = 7$ (b) $x = -23/9$

(c) $x = 27$ (d) $x = 3/2$

8. (a) $Area = 15\ cm^2$ (b) $Area = 42cm^2$

9. (a) $C = 56.52\ cm,$ $A = 254.34\ cm^2$ (b) $P = 48.83\ cm,$ $A = 141.69\ cm^2$

Year 8 Retention Sheet A7

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{7}{9}+3\frac{5}{11}=$ (b) $2\frac{1}{6}-2\frac{4}{5}=$

(c) $2\frac{8}{9}\times 3\frac{4}{5}=$ (d) $1\frac{3}{4}\div 2\frac{10}{11}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=$ - 6, $a=$ - 5 & $t=9$, (b) $u=$ 3.2, $a=$ 6.3 & $t=7$

3. Expand and Simplify:

(a) $9(4x-1)=$ (b) $-1-8(8x+4)=$

(c) $5(5x-3)+8(2x-5)=$ (d) $9x(5x+2)+2(3x-6)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 10:16 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$91$. They divide the money on the ration $3:4$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $8:7:7$ respectively. If she uses $88\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	5
3	6
4	8
5	3

x	Frequency
1	1
2	4
3	6
4	7
5	2

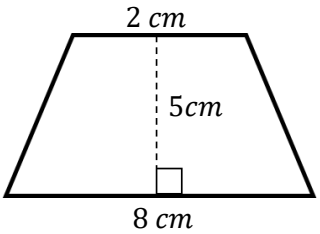
7. Solve:

(a) $-6x-3=39$ (b) $-x-8=5x+4$

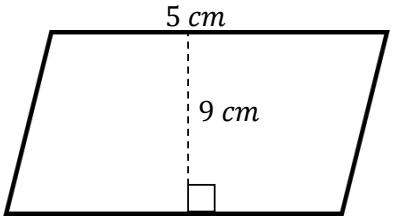
(c) $4(3x-8)=5x+6$ (d) $-2(-3x+4)=-(3x+3)$

8. Find the area of the trapezium and parallelogram.

(a)

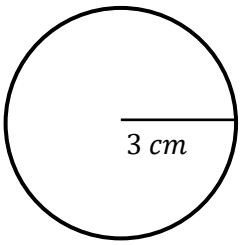


(b)

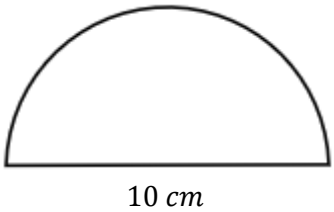


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A7

1. (a) $\frac{518}{99}$ (b) $\frac{-19}{30}$

(c) $\frac{494}{45}$ (d) $\frac{77}{128}$

2. (a) $s = -173$ (b) $s = 175$

3. (a) $36x - 9$ (b) $-64x - 33$

(c) $-64x - 33$ (d) $45x^2 + 24x - 12$

4. (a) See quadrilaterals sheet

5. (a) $10:16$ (b) Bill gets \$39 and Ben gets \$52 (c) 77 ml of apple and 77 ml of pineapple

6. (a) 3.45 (b) 3.25

7. (a) $x = -7$ (b) $x = -2$

(c) $x = 38/7$ (d) $x = 5/9$

8. (a) $Area = 25\ cm^2$ (b) $Area = 45cm^2$

9. (a) $C = 18.84\ cm,$ $A = 28.26\ cm^2$ (b) $P = 25.70\ cm,$ $A = 39.25\ cm^2$

Year 8 Retention Sheet A8

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{2}{3}+1\frac{5}{6}=$ (b) $3\frac{5}{8}-3\frac{1}{10}=$

(c) $1\frac{7}{8}\times 3\frac{2}{7}=$ (d) $3\frac{2}{3}\div 2\frac{8}{11}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=9, a=5 \ \& \ t=2,$ (b) $u=$ - $5.1, a=$ - $1.6 \ \& \ t=5$

3. Expand and Simplify:

(a) $-4(3x+5)=$ (b) $-3+7(2x+9)=$

(c) $-4(5x+6)+8(3x-8)=$ (d) $-8x(5x+5)+9(2x-5)=$

4. Draw a sketch of a **kite** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 24:20 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$231$. They divide the money on the ration $3:8$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $1:2:7$ respectively. If she uses $24\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	4
3	6
4	7
5	2

x	Frequency
1	1
2	4
3	6
4	7
5	2

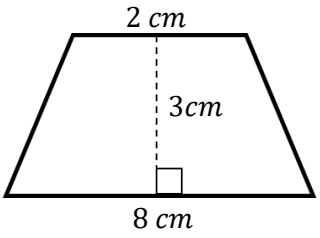
7. Solve:

(a) $6x+8=2$ (b) $-5x-19=2x-8$

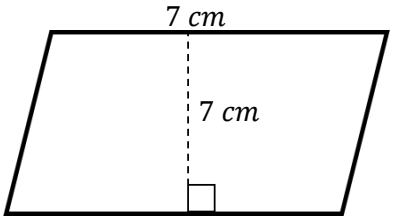
(c) $5(-5x+4)=-4x-4$ (d) $3(-5x+6)=2(-x-7)$

8. Find the area of the trapezium and parallelogram.

(a)

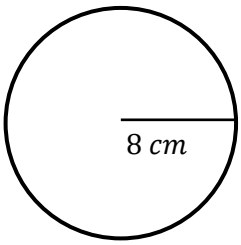


(b)

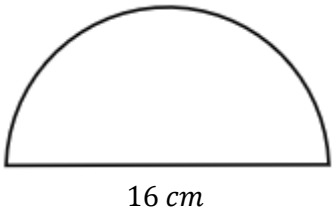


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A8

1. (a) $\frac{7}{2}$ (b) $\frac{21}{40}$

(c) $\frac{345}{56}$ (d) $\frac{121}{90}$

2. (a) $s = 55$ (b) $s = -12$

3. (a) $-12x - 20$ (b) $14x + 60$

(c) $14x + 60$ (d) $-40x^2 - 22x - 45$

4. (a) See quadrilaterals sheet

5. (a) $24:20$ (b) Bill gets \$63 and Ben gets \$168 (c) 48 ml of apple and 168 ml of pineapple

6. (a) 3.25 (b) 3.25

7. (a) $x = -1$ (b) $x = -11/7$

(c) $x = 8/7$ (d) $x = 32/13$

8. (a) $Area = 15\ cm^2$ (b) $Area = 49cm^2$

9. (a) $C = 50.24\ cm,$ $A = 200.96\ cm^2$ (b) $P = 41.12\ cm,$ $A = 100.48\ cm^2$

Year 8 Retention Sheet A9

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $3\frac{3}{5}+2\frac{2}{9}=$ (b) $2\frac{2}{3}-1\frac{8}{9}=$

(c) $3\frac{5}{12}\times 2\frac{8}{11}=$ (d) $2\frac{1}{9}\div 3\frac{1}{2}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=$ - 3, $a=$ - 5 & $t=2$, (b) $u=$ 4.8, $a=$ 7.4 & $t=10$

3. Expand and Simplify:

(a) $-5(1x+2)=$ (b) $6+3(6x-1)=$

(c) $-2(3x-2)-5(x+7)=$ (d) $-9x(3x+3)-3(3x-2)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 24:28 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$55$. They divide the money on the ration $3:2$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $8:7:1$ respectively. If she uses $152\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	3
3	5
4	8
5	5

x	Frequency
1	0
2	5
3	5
4	8
5	2

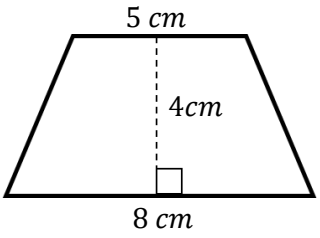
7. Solve:

(a) $-x+1=3$ (b) $-4x-2=4x-15$

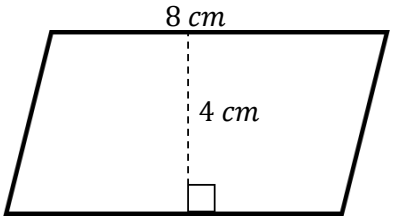
(c) $2(3x+7)=-4x+8$ (d) $-4(-2x-4)=-2(2x-1)$

8. Find the area of the trapezium and parallelogram.

(a)

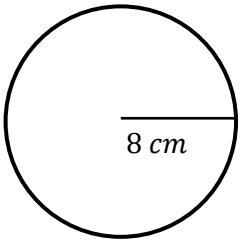


(b)

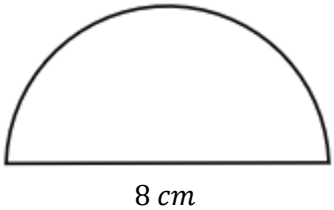


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A9

1. (a) $\frac{262}{45}$ (b) $\frac{7}{9}$

(c) $\frac{205}{22}$ (d) $\frac{38}{63}$

2. (a) $s = 5$ (b) $s = 406$

3. (a) $-5x - 10$ (b) $18x + 3$

(c) $18x + 3$ (d) $-27x^2 - 36x + 6$

4. (a) See quadrilaterals sheet

5. (a) $24:28$ (b) Bill gets \$33 and Ben gets \$22 (c) $133\ ml$ of apple and $19\ ml$ of pineapple

6. (a) 3.75 (b) 3.35

7. (a) $x = -2$ (b) $x = 13/8$

(c) $x = -3/5$ (d) $x = -7/6$

8. (a) $Area = 26\ cm^2$ (b) $Area = 32cm^2$

9. (a) $C = 50.24\ cm,$ $A = 200.96\ cm^2$ (b) $P = 20.56\ cm,$ $A = 25.12\ cm^2$

Year 8 Retention Sheet A10

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $2\frac{9}{11}+1\frac{6}{7}=$ (b) $1\frac{1}{2}-3\frac{2}{7}=$

(c) $1\frac{2}{9}\times 3\frac{8}{11}=$ (d) $3\frac{2}{3}\div 1\frac{3}{4}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=$ - $8, a=5$ & $t=8,$ (b) $u=0.5, a=9.1$ & $t=6$

3. Expand and Simplify:

(a) $-6(3x-9)=$ (b) $-2-9(4x-3)=$

(c) $-2(2x-5)+9(5x-8)=$ (d) $8x(x-5)-2(4x+1)=$

4. Draw a sketch of a **kite** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 30:80 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$272$. They divide the money on the ration $9:8$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $3:3:4$ respectively. If she uses $21\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	3
3	5
4	7
5	4

x	Frequency
1	1
2	5
3	5
4	8
5	1

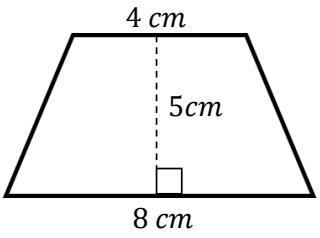
7. Solve:

(a) $6x-8=16$ (b) $9x-7=6x-16$

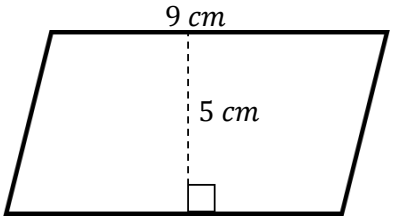
(c) $-2(-3x-3)=-5x+9$ (d) $5(-3x-6)=-3(-x+3)$

8. Find the area of the trapezium and parallelogram.

(a)

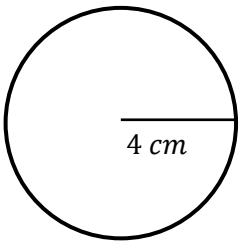


(b)

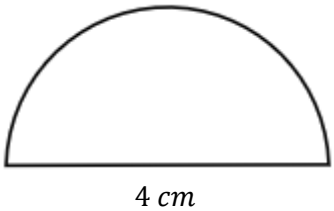


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A10

1. (a) $\frac{360}{77}$ (b) $\frac{-25}{14}$

(c) $\frac{41}{9}$ (d) $\frac{44}{21}$

2. (a) $s = 120$ (b) $s = 168$

3. (a) $-18x + 54$ (b) $-36x + 25$

(c) $-36x + 25$ (d) $8x^2 - 48x - 2$

4. (a) See quadrilaterals sheet

5. (a) $30:80$ (b) Bill gets $\$144$ and Ben gets $\$128$ (c) $21\ ml$ of apple and $28\ ml$ of pineapple

6. (a) 3.50 (b) 3.15

7. (a) $x = 4$ (b) $x = -3$

(c) $x = 3/11$ (d) $x = -7/6$

8. (a) $Area = 30\ cm^2$ (b) $Area = 45cm^2$

9. (a) $C = 25.12\ cm,$ $A = 50.24\ cm^2$ (b) $P = 10.28\ cm,$ $A = 6.28\ cm^2$

Year 8 Retention Sheet A11

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $2\frac{5}{8}+3\frac{1}{9}=$ (b) $3\frac{6}{11}-1\frac{1}{8}=$

(c) $2\frac{3}{10}\times 1\frac{7}{11}=$ (d) $2\frac{8}{9}\div 2\frac{1}{3}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=8, a=-7$ & $t=10,$ (b) $u=5.0, a=8.9$ & $t=9$

3. Expand and Simplify:

(a) $5(5x-6)=$ (b) $5+9(6x+9)=$

(c) $-4(x-6)-2(2x+4)=$ (d) $5x(4x-9)-2(5x+8)=$

4. Draw a sketch of a **kite** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 22:33 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$77$. They divide the money on the ration $2:5$. How much do each of them get?

(c) Gill is making mixed fruit juice. She makes it by mixing orange juice, apple juice and pineapple juice in the ratio $5:4:1$ respectively. If she uses $60\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	5
3	4
4	7
5	3

x	Frequency
1	1
2	4
3	4
4	7
5	4

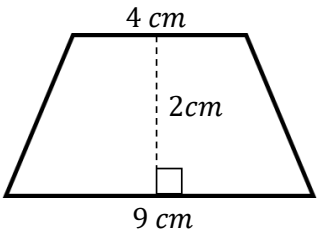
7. Solve:

(a) $-8x+3=19$ (b) $8x+5=6x-9$

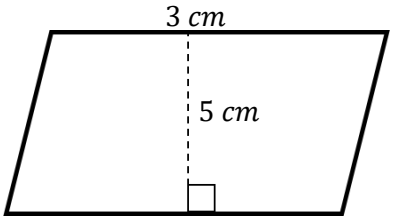
(c) $-5(5x-3)=-3x-1$ (d) $-2(4x-6)=-4(3x+1)$

8. Find the area of the trapezium and parallelogram.

(a)

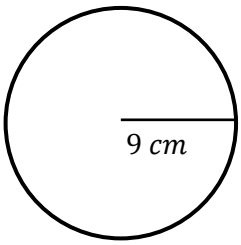


(b)

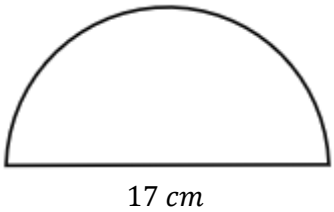


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A11

1. (a) $\frac{413}{72}$ (b) $\frac{213}{88}$

(c) $\frac{207}{55}$ (d) $\frac{26}{21}$

2. (a) $s = -406$ (b) $s = 405$

3. (a) $25x - 30$ (b) $54x + 86$

(c) $54x + 86$ (d) $20x^2 - 55x - 16$

4. (a) See quadrilaterals sheet

5. (a) $22:33$ (b) Bill gets \$22 and Ben gets \$55 (c) 48 ml of apple and 12 ml of pineapple

6. (a) 3.40 (b) 3.45

7. (a) $x = -2$ (b) $x = -7$

(c) $x = 8/11$ (d) $x = -4$

8. (a) $Area = 13\ cm^2$ (b) $Area = 15cm^2$

9. (a) $C = 56.52\ cm,$ $A = 254.34\ cm^2$ (b) $P = 43.69\ cm,$ $A = 113.43\ cm^2$

Year 8 Retention Sheet A12

1. Calculate leaving your answer as an improper fraction in its simplest form.

$(a)\quad 2\frac{6}{7}+3\frac{1}{3}=$ $(b)\quad 2\frac{7}{9}-2\frac{1}{6}=$

$(c)\quad 1\frac{5}{6}\times 2\frac{1}{7}=$ $(d)\quad 1\frac{7}{12}\div 2\frac{3}{5}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

$(a)\quad u=3, a=6 \;\&\; t=4,$ $(b)\quad u=5.2, a=-0.6 \;\&\; t=3$

3. Expand and Simplify:

$(a)\quad -3(1x-8)=$ $(b)\quad -8+3(7x-5)=$

$(c)\quad -3(x-1)-5(5x+8)=$ $(d)\quad 6x(4x-6)+2(3x-4)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 33:77 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$72$. They divide the money on the ration $1:7$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $8:7:3$ respectively. If she uses $272\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	5
3	4
4	7
5	2

x	Frequency
1	0
2	3
3	4
4	8
5	5

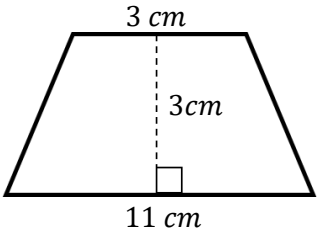
7. Solve:

$(a)\quad -8x+6=46$ $(b)\quad -2x+6=6x-7$

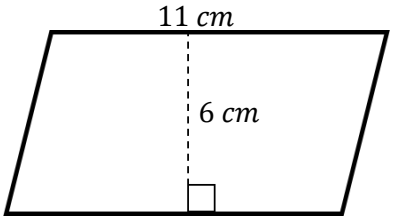
$(c)\quad -3(5x-9)=-4x+8$ $(d)\quad 3(-4x-4)=-(-x-6)$

8. Find the area of the trapezium and parallelogram.

(a)

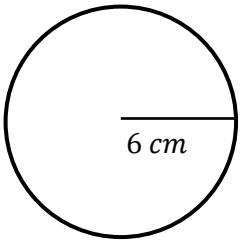


(b)

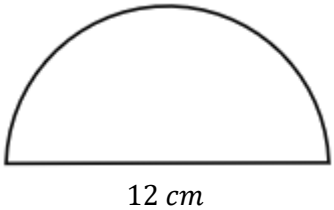


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A12

1. (a) $\frac{130}{21}$ (b) $\frac{11}{18}$

(c) $\frac{55}{14}$ (d) $\frac{95}{156}$

2. (a) $s = 66$ (b) $s = -6$

3. (a) $-3x + 24$ (b) $21x - 23$

(c) $21x - 23$ (d) $24x^2 - 30x - 8$

4. (a) See quadrilaterals sheet

5. (a) $33:77$ (b) Bill gets \$9 and Ben gets \$63 (c) $238\ ml$ of apple and $102\ ml$ of pineapple

6. (a) 3.20 (b) 3.75

7. (a) $x = -5$ (b) $x = 13/8$

(c) $x = 19/11$ (d) $x = -18/13$

8. (a) $Area = 21\ cm^2$ (b) $Area = 66cm^2$

9. (a) $C = 37.68\ cm,$ $A = 113.04\ cm^2$ (b) $P = 30.84\ cm,$ $A = 56.52\ cm^2$

Year 8 Retention Sheet A13

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{4}{7}+2\frac{1}{3}=$ (b) $2\frac{9}{10}-2\frac{5}{9}=$

(c) $1\frac{7}{11}\times 2\frac{1}{7}=$ (d) $3\frac{4}{9}\div 1\frac{1}{3}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=3, a=2 \,\&\, t=2,$ (b) $u=$ - $3.0, a=9.4 \,\&\, t=7$

3. Expand and Simplify:

(a) $-8(9x-9)=$ (b) $2-3(5x+9)=$

(c) $9(3x-4)-8(3x+7)=$ (d) $2x(3x+7)-3(2x+9)=$

4. Draw a sketch of a **trapezium** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 3:6 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$60$. They divide the money on the ration $1:4$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $5:6:4$ respectively. If she uses $140\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	5
3	4
4	7
5	3

x	Frequency
1	0
2	5
3	4
4	8
5	3

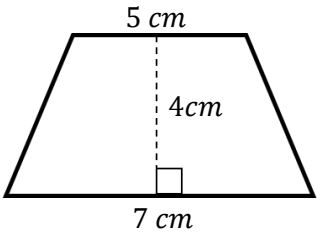
7. Solve:

(a) $-4x-5=27$ (b) $-3x-2=-2x+4$

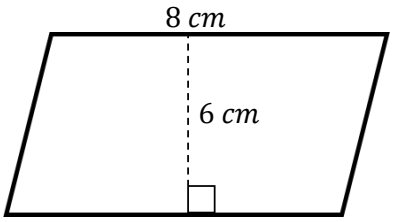
(c) $3(5x-9)=3x+3$ (d) $-3(-3x-5)=4(-4x+9)$

8. Find the area of the trapezium and parallelogram.

(a)

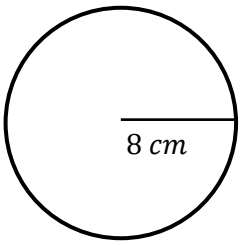


(b)

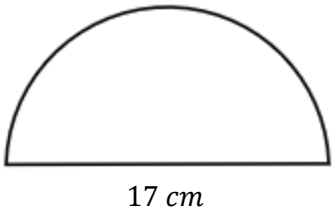


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A13

1. (a) $\frac{82}{21}$ (b) $\frac{31}{90}$

(c) $\frac{270}{77}$ (d) $\frac{31}{12}$

2. (a) $s = 10$ (b) $s = 202$

3. (a) $-72x + 72$ (b) $-15x - 25$

(c) $-15x - 25$ (d) $6x^2 + 8x - 27$

4. (a) See quadrilaterals sheet

5. (a) $3:6$ (b) Bill gets \$12 and Ben gets \$48 (c) $168\ ml$ of apple and $112\ ml$ of pineapple

6. (a) 3.40 (b) 3.45

7. (a) $x = -8$ (b) $x = -6$

(c) $x = 5/2$ (d) $x = 21/25$

8. (a) $Area = 24\ cm^2$ (b) $Area = 48cm^2$

9. (a) $C = 50.24\ cm,$ $A = 200.96\ cm^2$ (b) $P = 43.69\ cm,$ $A = 113.43\ cm^2$

Year 8 Retention Sheet A14

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $3\frac{1}{3}+2\frac{5}{6}=$ (b) $1\frac{7}{12}-1\frac{8}{9}=$

(c) $2\frac{9}{10}\times 1\frac{7}{9}=$ (d) $1\frac{3}{4}\div 1\frac{10}{11}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=0, a=6 \ \& \ t=7,$ (b) $u=$ - $0.3, a=$ - $8.3 \ \& \ t=9$

3. Expand and Simplify:

(a) $9(1x-3)=$ (b) $9+2(6x-7)=$

(c) $3(4x+1)-2(3x-3)=$ (d) $-5x(x+5)-5(3x+6)=$

4. Draw a sketch of a **kite** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 18:14 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$225$. They divide the money on the ration $1:8$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $2:5:8$ respectively. If she uses $18\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	5
3	4
4	7
5	3

x	Frequency
1	0
2	5
3	4
4	7
5	4

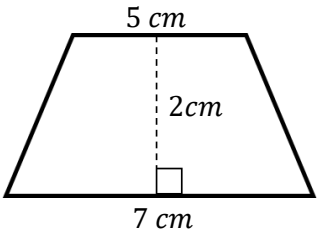
7. Solve:

(a) $7x+1=57$ (b) $-8x-12=3x-2$

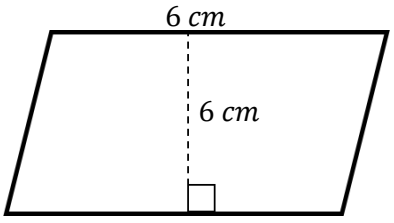
(c) $-(2x+4)=-3x-4$ (d) $-5(5x-4)=-4(3x-4)$

8. Find the area of the trapezium and parallelogram.

(a)

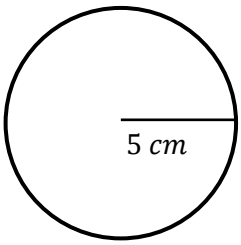


(b)

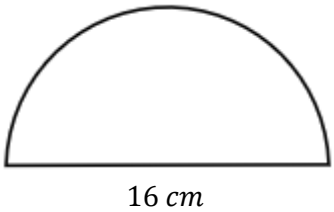


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A14

1. (a) $\frac{37}{6}$ (b) $\frac{-11}{36}$

(c) $\frac{232}{45}$ (d) $\frac{11}{12}$

2. (a) $s = 147$ (b) s = -334

3. (a) $9x - 27$ (b) $12x - 5$

(c) $12x - 5$ (d) $-5x^2 - 40x - 30$

4. (a) See quadrilaterals sheet

5. (a) $18:14$ (b) Bill gets \$25 and Ben gets \$200 (c) 45 ml of apple and 72 ml of pineapple

6. (a) 3.40 (b) 3.50

7. (a) $x = 8$ (b) $x = -10/11$

(c) $x = 0$ (d) x = 4/13

8. (a) $Area = 12\ cm^2$ (b) $Area = 36cm^2$

9. (a) $C = 31.40\ cm,$ $A = 78.50\ cm^2$ (b) $P = 41.12\ cm,$ $A = 100.48\ cm^2$

Year 8 Retention Sheet A15

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{3}{4}+2\frac{7}{10}=$ (b) $3\frac{5}{6}-3\frac{1}{2}=$

(c) $2\frac{7}{11}\times 1\frac{7}{12}=$ (d) $3\frac{2}{5}\div 2\frac{2}{9}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=8, a=6$ & $t=8,$ (b) $u=$ - 9.1, $a=$ - 2.0 & $t=3$

3. Expand and Simplify:

(a) $-5(5x+3)=$ (b) $-2+9(3x+2)=$

(c) $8(4x+5)+4(2x-9)=$ (d) $-1x(3x+8)+8(x-7)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 9:3 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$44$. They divide the money on the ration $3:1$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $6:2:1$ respectively. If she uses $24\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	3
3	6
4	8
5	4

x	Frequency
1	0
2	3
3	6
4	7
5	4

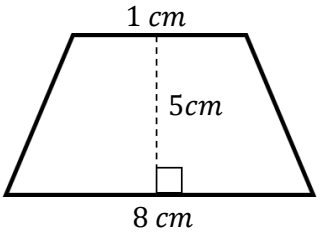
7. Solve:

(a) $2x+1=5$ (b) $-8x-18=4x+2$

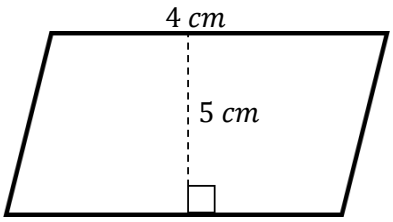
(c) $2(-5x+2)=-2x+5$ (d) $4(5x+4)=3(-2x-5)$

8. Find the area of the trapezium and parallelogram.

(a)

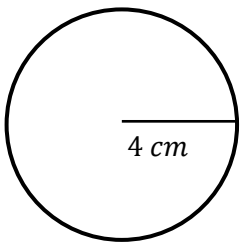


(b)

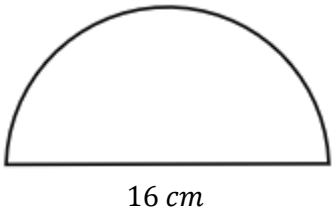


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A15

1. (a) $\frac{89}{20}$ (b) $\frac{1}{3}$

(c) $\frac{551}{132}$ (d) $\frac{153}{100}$

2. (a) $s = 240$ (b) $s = 9$

3. (a) $-25x - 15$ (b) $27x + 16$

(c) $27x + 16$ (d) $-3x^2 - 56$

4. (a) See quadrilaterals sheet

5. (a) $9:3$ (b) Bill gets \$33 and Ben gets \$11 (c) 8 ml of apple and 4 ml of pineapple

6. (a) 3.65 (b) 3.60

7. (a) $x = 2$ (b) $x = -5/3$

(c) $x = -1/8$ (d) $x = -31/26$

8. (a) $Area = 22.5\ cm^2$ (b) $Area = 20cm^2$

9. (a) $C = 25.12\ cm,$ $A = 50.24\ cm^2$ (b) $P = 41.12\ cm,$ $A = 100.48\ cm^2$

Year 8 Retention Sheet A16

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $2\frac{1}{6}+1\frac{6}{11}=$ (b) $3\frac{7}{12}-1\frac{2}{5}=$

(c) $3\frac{10}{11}\times 1\frac{4}{5}=$ (d) $2\frac{3}{5}\div 3\frac{1}{2}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=2, a=-9 \ \& \ t=3,$ (b) $u=-7.7, a=1.9 \ \& \ t=10$

3. Expand and Simplify:

(a) $-7(9x-2)=$ (b) $-3-1(6x+6)=$

(c) $-9(5x-6)-8(2x+2)=$ (d) $-8x(2x-1)+8(3x+7)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 4:2 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$140$. They divide the money on the ration $3:4$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $1:4:7$ respectively. If she uses $21\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	3
3	4
4	7
5	5

x	Frequency
1	0
2	5
3	4
4	8
5	3

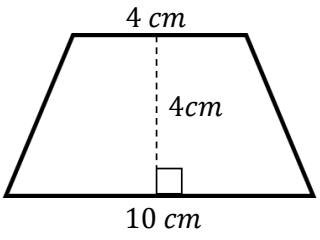
7. Solve:

(a) $-3x+9=15$ (b) $7x-5=-8x-16$

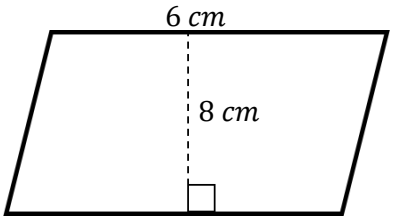
(c) $-2(-x+1)=-3x-4$ (d) $-3(-x+7)=-5(-3x-5)$

8. Find the area of the trapezium and parallelogram.

(a)

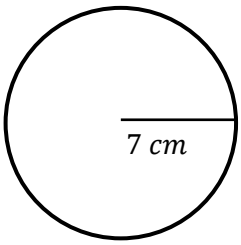


(b)

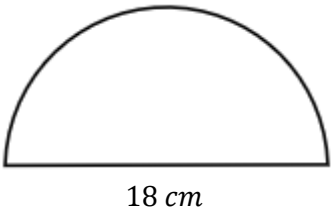


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A16

1. (a) $\frac{245}{66}$ (b) $\frac{131}{60}$

(c) $\frac{387}{55}$ (d) $\frac{26}{35}$

2. (a) $s = -59$ (b) $s = 80$

3. (a) $-63x + 14$ (b) $-6x - 9$

(c) $-6x - 9$ (d) $-16x^2 + 32x + 56$

4. (a) See quadrilaterals sheet

5. (a) $4:2$ (b) Bill gets \$60 and Ben gets \$80 (c) $84\ ml$ of apple and $147\ ml$ of pineapple

6. (a) 3.60 (b) 3.45

7. (a) $x = -2$ (b) $x = -11/15$

(c) $x = -2/5$ (d) $x = -23/6$

8. (a) $Area = 28\ cm^2$ (b) $Area = 48cm^2$

9. (a) $C = 43.96\ cm,$ $A = 153.86\ cm^2$ (b) $P = 46.26\ cm,$ $A = 127.17\ cm^2$

Year 8 Retention Sheet A17

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{7}{11}+3\frac{5}{6}=$ (b) $1\frac{1}{3}-1\frac{1}{11}=$

(c) $3\frac{5}{6}\times 3\frac{1}{5}=$ (d) $1\frac{2}{5}\div 2\frac{7}{11}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=2, a=1 \,\&\, t=4,$ (b) $u=$ - 8.8, $a=$ - 8.4 $\&\, t=5$

3. Expand and Simplify:

(a) $-6(1x+7)=$ (b) $-4+7(2x-2)=$

(c) $2(2x+6)-8(4x+1)=$ (d) $8x(5x+7)-8(5x+9)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 15:25 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$425$. They divide the money on the ration $9:8$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $7:6:9$ respectively. If she uses $168\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	4
3	6
4	7
5	5

x	Frequency
1	0
2	3
3	6
4	7
5	4

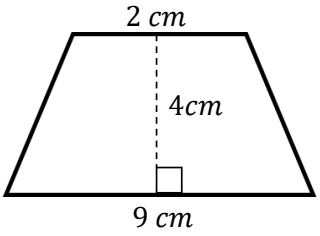
7. Solve:

(a) $-5x-8=27$ (b) $3x-9=7x-6$

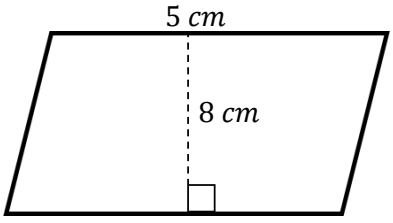
(c) $-3(-4x-3)=4x-8$ (d) $4(-2x-2)=2(2x-6)$

8. Find the area of the trapezium and parallelogram.

(a)

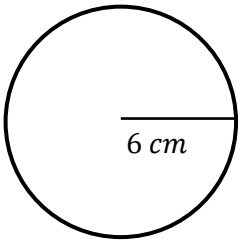


(b)

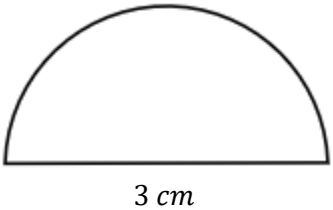


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A17

1. (a) $\frac{361}{66}$ (b) $\frac{8}{33}$

(c) $\frac{184}{15}$ (d) $\frac{77}{145}$

2. (a) $s = 10$ (b) s = -31

3. (a) $-6x - 42$ (b) $14x - 18$

(c) $14x - 18$ (d) $40x^2 + 16x - 72$

4. (a) See quadrilaterals sheet

5. (a) $15:25$ (b) Bill gets \$225 and Ben gets \$200 (c) $144\ ml$ of apple and $216\ ml$ of pineapple

6. (a) 3.65 (b) 3.60

7. (a) $x = -7$ (b) $x = -3/4$

(c) x = –17/8 (d) x = 1/3

8. (a) $Area = 22\ cm^2$ (b) $Area = 40cm^2$

9. (a) $C = 37.68\ cm,$ $A = 113.04\ cm^2$ (b) $P =\ 7.71\ cm,$ $A =\ 3.53\ cm^2$

Year 8 Retention Sheet A18

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $2\frac{6}{7}+2\frac{1}{2}=$ (b) $3\frac{3}{4}-2\frac{1}{8}=$

(c) $3\frac{10}{11}\times 3\frac{2}{7}=$ (d) $2\frac{2}{5}\div 3\frac{5}{7}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=5, a=3$ & $t=10,$ (b) $u=3.5, a=6.0$ & $t=6$

3. Expand and Simplify:

(a) $-5(5x-6)=$ (b) $6+7(3x+8)=$

(c) $-3(2x+5)-1(5x-3)=$ (d) $5x(4x-8)+9(2x+9)=$

4. Draw a sketch of a **trapezium** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 12:42 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$200$. They divide the money on the ration $1:9$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $2:3:3$ respectively. If she uses $80\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	3
3	6
4	8
5	3

x	Frequency
1	1
2	3
3	6
4	7
5	3

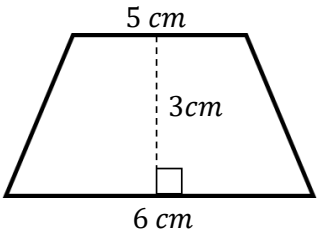
7. Solve:

(a) $-7x-5=-33$ (b) $3x-6=7x-19$

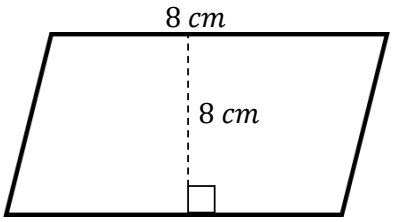
(c) $-2(3x+6)=2x-6$ (d) $2(-x-3)=-3(-4x-1)$

8. Find the area of the trapezium and parallelogram.

(a)

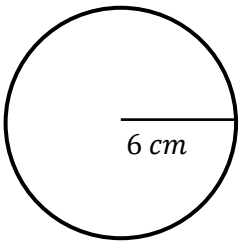


(b)

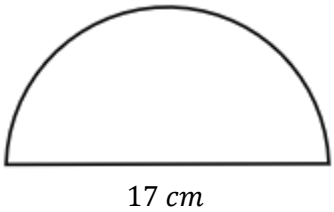


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A18

1. (a) $\frac{75}{14}$ (b) $\frac{13}{8}$

(c) $\frac{989}{77}$ (d) $\frac{42}{65}$

2. (a) $s = 165$ (b) $s = 129$

3. (a) $-25x + 30$ (b) $21x + 62$

(c) $21x + 62$ (d) $20x^2 - 22x + 81$

4. (a) See quadrilaterals sheet

5. (a) $12:42$ (b) Bill gets \$20 and Ben gets \$180 (c) 120 ml of apple and 120 ml of pineapple

6. (a) 3.55 (b) 3.40

7. (a) $x = 4$ (b) $x = 13/4$

(c) $x = -3/4$ (d) $x = -9/14$

8. (a) $Area = 16.5\ cm^2$ (b) $Area = 64cm^2$

9. (a) $C = 37.68\ cm,$ $A = 113.04\ cm^2$ (b) $P = 43.69\ cm,$ $A = 113.43\ cm^2$

Year 8 Retention Sheet A19

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{5}{6}+1\frac{5}{9}=$ (b) $2\frac{10}{11}-1\frac{7}{9}=$

(c) $2\frac{6}{7}\times 2\frac{8}{9}=$ (d) $3\frac{1}{2}\div 2\frac{3}{11}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=$ - $2, a=$ -10 & $t=9,$ (b) $u=$ - $7.4, a=$ - 2.6 & $t=5$

3. Expand and Simplify:

(a) $6(9x-8)=$ (b) $9+2(2x-8)=$

(c) $-6(2x-4)+7(x+4)=$ (d) $4x(5x-9)+5(3x+9)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 36:45 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$187$. They divide the money on the ration $8:9$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $4:7:1$ respectively. If she uses $124\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	4
3	4
4	7
5	2

x	Frequency
1	0
2	4
3	4
4	7
5	5

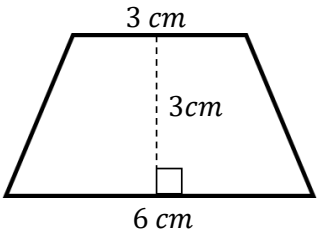
7. Solve:

(a) $-3x+6=30$ (b) $-4x-17=6x-20$

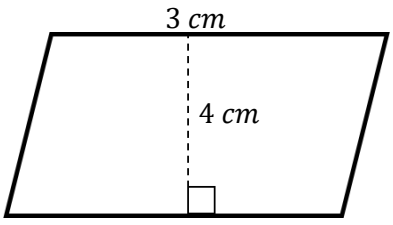
(c) $-(3x-9)=-5x-3$ (d) $-4(-2x+3)=-3(2x+4)$

8. Find the area of the trapezium and parallelogram.

(a)

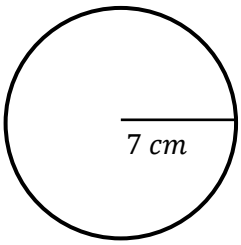


(b)

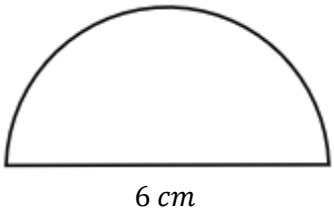


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A19

1. (a) $\frac{61}{18}$ (b) $\frac{112}{99}$

(c) $\frac{520}{63}$ (d) $\frac{77}{50}$

2. (a) $s = -385$ (b) $s = -13$

3. (a) $54x - 48$ (b) $4x - 7$

(c) $4x - 7$ (d) $20x^2 - 21x + 45$

4. (a) See quadrilaterals sheet

5. (a) $36:45$ (b) Bill gets \$88 and Ben gets \$99 (c) 217 ml of apple and 31 ml of pineapple

6. (a) 3.25 (b) 3.65

7. (a) $x = -8$ (b) $x = 3/10$

(c) $x = -6$ (d) $x = 0$

8. (a) $Area = 13.5\ cm^2$ (b) $Area = 12cm^2$

9. (a) $C = 43.96\ cm,$ $A = 153.86\ cm^2$ (b) $P = 15.42\ cm,$ $A = 14.13\ cm^2$

Year 8 Retention Sheet A20

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{5}{9}+3\frac{3}{5}=$ (b) $1\frac{1}{2}-3\frac{4}{5}=$

(c) $1\frac{1}{11}\times 1\frac{2}{3}=$ (d) $2\frac{1}{5}\div 3\frac{2}{3}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=6, a=1 \,\&\, t=4,$ (b) $u=9.1, a=0.3 \,\&\, t=7$

3. Expand and Simplify:

(a) $-8(8x+5)=$ (b) $5-3(6x-3)=$

(c) $-9(x-6)+2(3x+2)=$ (d) $4x(2x+5)+6(x-2)=$

4. Draw a sketch of a **trapezium** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 12:28 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$18$. They divide the money on the ration $1:2$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $4:1:4$ respectively. If she uses $88\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	5
3	4
4	7
5	1

x	Frequency
1	0
2	5
3	4
4	7
5	4

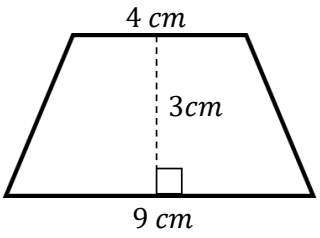
7. Solve:

(a) $-6x+8=-46$ (b) $-8x-13=8x-14$

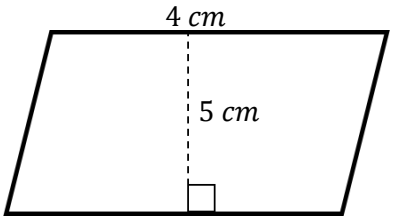
(c) $4(-4x+3)=2x+5$ (d) $3(-5x-5)=-3(-4x-8)$

8. Find the area of the trapezium and parallelogram.

(a)

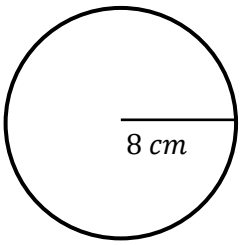


(b)

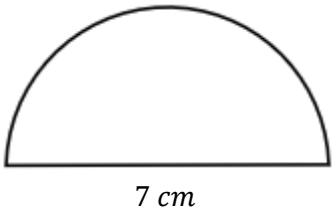


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A20

1. (a) $\frac{232}{45}$ (b) $\frac{-23}{10}$

(c) $\frac{20}{11}$ (d) $\frac{3}{5}$

2. (a) $s = 14$ (b) $s = 10$

3. (a) $-64x - 40$ (b) $-18x + 14$

(c) $-18x + 14$ (d) $8x^2 + 26x - 12$

4. (a) See quadrilaterals sheet

5. (a) $12:28$ (b) Bill gets \$6 and Ben gets \$12 (c) 22 ml of apple and 88 ml of pineapple

6. (a) 3.10 (b) 3.50

7. (a) $x = 9$ (b) $x = 1/16$

(c) $x = 7/18$ (d) $x = -13/9$

8. (a) $Area = 19.5\ cm^2$ (b) $Area = 20cm^2$

9. (a) $C = 50.24\ cm,$ $A = 200.96\ cm^2$ (b) $P = 17.99\ cm,$ $A = 19.23\ cm^2$

Year 8 Retention Sheet A21

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $2\frac{4}{9}+2\frac{3}{4}=$

(b) $2\frac{5}{11}-2\frac{4}{5}=$

(c) $3\frac{1}{2}\times 1\frac{1}{5}=$

(d) $3\frac{7}{12}\div 3\frac{1}{4}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=$ - 4, $a=$ - 8 & $t=8$,

(b) $u=$ 6.1, $a=$ 5.2 & $t=4$

3. Expand and Simplify:

(a) $-3(6x-6)=$

(b) $-8+2(4x-9)=$

(c) $-6(x-4)+9(3x+7)=$

(d) $8x(3x-4)+7(4x+8)=$

4. Draw a sketch of a **kite** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 2:6 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$112$. They divide the money on the ration $9:7$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $2:3:3$ respectively. If she uses $72\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	3
3	4
4	8
5	2

x	Frequency
1	1
2	3
3	4
4	8
5	4

7. Solve:

(a) $-x+3=-6$

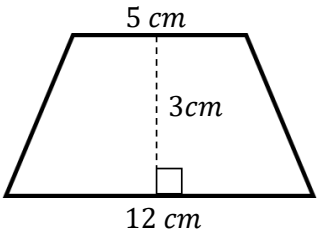
(b) $4x-11=-7x-7$

(c) $-5(4x-9)=3x+4$

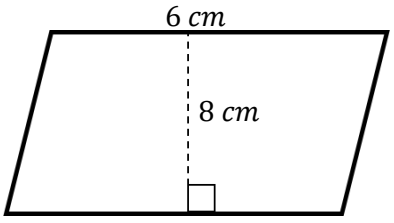
(d) $3(3x+7)=2(2x+3)$

8. Find the area of the trapezium and parallelogram.

(a)

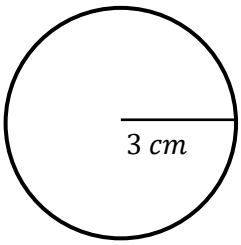


(b)

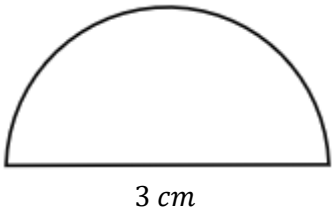


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A21

1. (a) $\frac{187}{36}$ (b) $\frac{-19}{55}$

(c) $\frac{21}{5}$ (d) $\frac{43}{39}$

2. (a) $s = -224$ (b) $s = 73$

3. (a) $-18x + 18$ (b) $8x - 26$

(c) $8x - 26$ (d) $24x^2 - 4x + 56$

4. (a) See quadrilaterals sheet

5. (a) $2:6$ (b) Bill gets \$63 and Ben gets \$49 (c) $108\ ml$ of apple and $108\ ml$ of pineapple

6. (a) 3.35 (b) 3.55

7. (a) $x = 9$ (b) $x = 4/11$

(c) $x = 41/23$ (d) $x = -3$

8. (a) $Area = 25.5\ cm^2$ (b) $Area = 48cm^2$

9. (a) $C = 18.84\ cm,$ $A = 28.26\ cm^2$ (b) $P = 7.71\ cm,$ $A = 3.53\ cm^2$

Year 8 Retention Sheet A22

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $2\frac{4}{9}+3\frac{1}{2}=$ (b) $2\frac{1}{2}-1\frac{2}{3}=$

(c) $1\frac{5}{8}\times 2\frac{5}{11}=$ (d) $3\frac{2}{3}\div 1\frac{1}{2}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=6, a=-9 \ \& \ t=8,$ (b) $u=-8.7, a=-1.6 \ \& \ t=2$

3. Expand and Simplify:

(a) $9(3x-8)=$ (b) $5+6(3x+7)=$

(c) $-5(3x-8)-8(2x+8)=$ (d) $5x(x-9)-4(5x+5)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 20:36 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$225$. They divide the money on the ration $8:7$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $2:2:3$ respectively. If she uses $4\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	3
3	5
4	8
5	3

x	Frequency
1	1
2	3
3	5
4	7
5	4

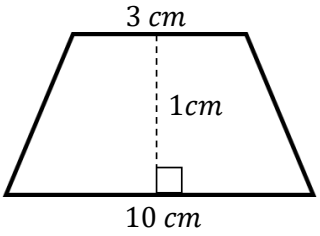
7. Solve:

(a) $5x-6=-16$ (b) $-3x-6=4x-12$

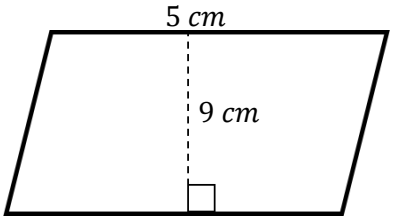
(c) $4(-x+1)=-3x+3$ (d) $5(-2x-7)=-3(-4x+4)$

8. Find the area of the trapezium and parallelogram.

(a)

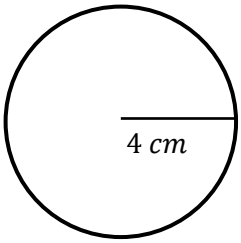


(b)

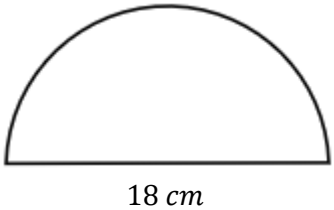


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A22

1. (a) $\frac{107}{18}$ (b) $\frac{5}{6}$

(c) $\frac{351}{88}$ (d) $\frac{22}{9}$

2. (a) $s = -342$ (b) $s = 11$

3. (a) $27x - 72$ (b) $18x + 47$

(c) $18x + 47$ (d) $5x^2 - 65x - 20$

4. (a) See quadrilaterals sheet

5. (a) $20:36$ (b) Bill gets \$120 and Ben gets \$105 (c) 4 ml of apple and 6 ml of pineapple

6. (a) 3.45 (b) 3.50

7. (a) $x = -2$ (b) $x = 6/7$

(c) $x = 1$ (d) $x = -23/22$

8. (a) $Area = 6.5\ cm^2$ (b) $Area = 45cm^2$

9. (a) $C = 25.12\ cm,$ $A = 50.24\ cm^2$ (b) $P = 46.26\ cm,$ $A = 127.17\ cm^2$

Year 8 Retention Sheet A23

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $2\frac{1}{3}+1\frac{1}{5}=$ (b) $1\frac{5}{12}-3\frac{5}{11}=$

(c) $2\frac{1}{2}\times 3\frac{10}{11}=$ (d) $1\frac{2}{3}\div 1\frac{7}{8}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=9, a=-1 \ \& \ t=9,$ (b) $u=-7.8, a=-0.8 \ \& \ t=9$

3. Expand and Simplify:

(a) $8(8x+2)=$ (b) $7-1(6x-5)=$

(c) $-6(3x+8)-4(5x-5)=$ (d) $9x(4x-4)+9(4x+3)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 32:20 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$242$. They divide the money on the ration $4:7$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $1:8:7$ respectively. If she uses $27\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	3
3	6
4	8
5	2

x	Frequency
1	1
2	5
3	6
4	8
5	0

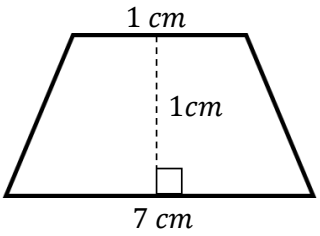
7. Solve:

(a) $-2x-9=5$ (b) $7x-13=-2x+6$

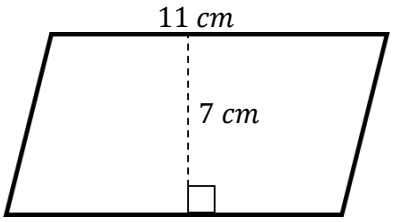
(c) $4(-x+5)=-3x+5$ (d) $2(-2x-5)=-2(3x-6)$

8. Find the area of the trapezium and parallelogram.

(a)

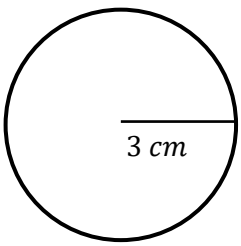


(b)



9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



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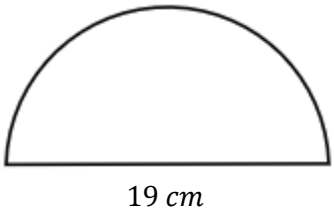


Year 8 Retention Sheet A23

1. (a) $\frac{53}{15}$ (b) $\frac{-269}{132}$

(c) $\frac{215}{22}$ (d) $\frac{8}{9}$

2. (a) $s = -50$ (b) $s = -26$

3. (a) $64x + 16$ (b) $-6x + 12$

(c) $-6x + 12$ (d) $36x^2 + 27$

4. (a) See quadrilaterals sheet

5. (a) $32:20$ (b) Bill gets \$88 and Ben gets \$154 (c) 216 ml of apple and 189 ml of pineapple

6. (a) 3.35 (b) 3.05

7. (a) $x = -7$ (b) $x = 19/9$

(c) $x = 15$ (d) $x = 11$

8. (a) $Area = 4\ cm^2$ (b) $Area = 77cm^2$

9. (a) $C = 18.84\ cm,$ $A = 28.26\ cm^2$ (b) $P = 48.83\ cm,$ $A = 141.69\ cm^2$

Year 8 Retention Sheet A24

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{2}{3}+3\frac{9}{11}=$ (b) $2\frac{1}{6}-2\frac{8}{11}=$

(c) $2\frac{1}{8}\times 1\frac{5}{9}=$ (d) $2\frac{1}{7}\div 2\frac{10}{11}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=3, a=-6 \ \& \ t=3,$ (b) $u=1.5, a=-8.4 \ \& \ t=5$

3. Expand and Simplify:

(a) $4(9x-5)=$ (b) $3-5(6x-1)=$

(c) $-4(3x-9)-7(x+8)=$ (d) $8x(x-1)-3(4x+5)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 72:56 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$85$. They divide the money on the ration $4:1$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $8:9:2$ respectively. If she uses $24\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	3
3	5
4	8
5	3

x	Frequency
1	0
2	5
3	5
4	8
5	2

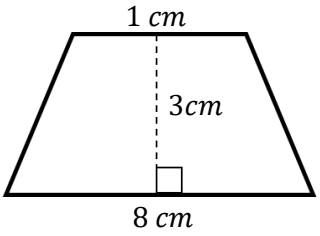
7. Solve:

(a) $-2x+3=-3$ (b) $6x+15=8x+7$

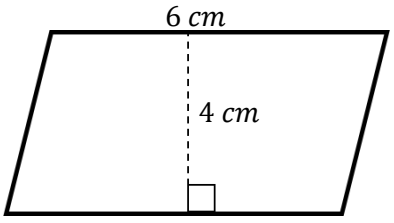
(c) $5(-4x+5)=2x+2$ (d) $2(-4x-7)=-4(-5x+5)$

8. Find the area of the trapezium and parallelogram.

(a)

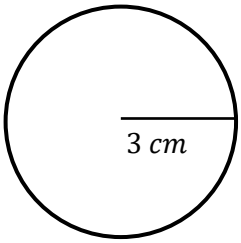


(b)

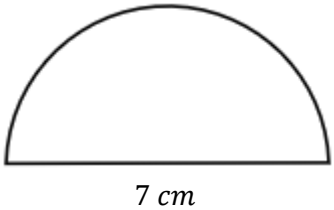


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A24

1. (a) $\frac{181}{33}$ (b) $\frac{-37}{66}$

(c) $\frac{119}{36}$ (d) $\frac{165}{224}$

2. (a) $s = -45$ (b) $s = -118$

3. (a) $36x - 20$ (b) $-30x + 8$

(c) $-30x + 8$ (d) $8x^2 - 20x - 15$

4. (a) See quadrilaterals sheet

5. (a) $72:56$ (b) Bill gets \$68 and Ben gets \$17 (c) 27 ml of apple and 6 ml of pineapple

6. (a) 3.45 (b) 3.35

7. (a) $x = 3$ (b) $x = 4$

(c) $x = 23/22$ (d) $x = 3/14$

8. (a) $Area = 13.5\ cm^2$ (b) $Area = 24cm^2$

9. (a) $C = 18.84\ cm,$ $A = 28.26\ cm^2$ (b) $P = 17.99\ cm,$ $A = 19.23\ cm^2$

Year 8 Retention Sheet A25

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $3\frac{5}{6}+1\frac{7}{9}=$ (b) $2\frac{10}{11}-1\frac{3}{10}=$

(c) $3\frac{6}{11}\times 1\frac{3}{4}=$ (d) $1\frac{10}{11}\div 2\frac{8}{9}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=6, a=3 \ \& \ t=6,$ (b) $u=1.2, a=2.2 \ \& \ t=3$

3. Expand and Simplify:

(a) $-8(9x+7)=$ (b) $-4-1(8x-3)=$

(c) $-5(x+3)-7(3x+3)=$ (d) $3x(3x+4)+8(4x+4)=$

4. Draw a sketch of a **kite** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 14:7 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$144$. They divide the money on the ration $3:5$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $2:3:2$ respectively. If she uses $46\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	3
3	6
4	7
5	6

x	Frequency
1	0
2	5
3	6
4	7
5	2

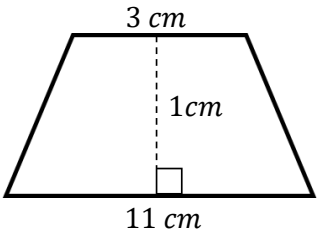
7. Solve:

(a) $-2x-2=8$ (b) $3x-4=9x+7$

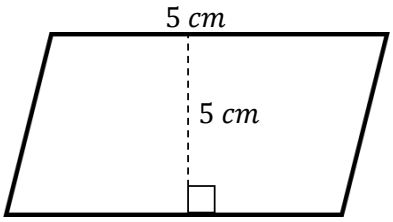
(c) $-(5x-2)=-2x-1$ (d) $-4(-3x-9)=-(3x+8)$

8. Find the area of the trapezium and parallelogram.

(a)

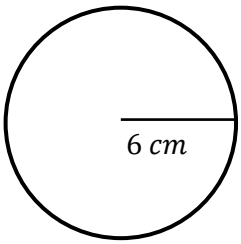


(b)

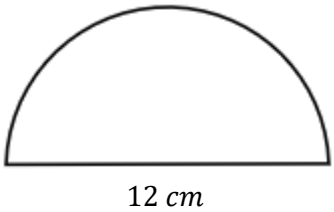


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A25

1. (a) $\frac{101}{18}$ (b) $\frac{177}{110}$

(c) $\frac{273}{44}$ (d) $\frac{189}{286}$

2. (a) $s = 72$ (b) $s = 13$

3. (a) $-72x - 56$ (b) $-8x - 1$

(c) $-8x - 1$ (d) $9x^2 + 44x + 32$

4. (a) See quadrilaterals sheet

5. (a) $14:7$ (b) Bill gets $\$54$ and Ben gets $\$90$ (c) $69\ ml$ of apple and $46\ ml$ of pineapple

6. (a) 3.80 (b) 3.30

7. (a) $x = -5$ (b) $x = -11/6$

(c) $x = 1$ (d) $x = -44/15$

8. (a) $Area = 7\ cm^2$ (b) $Area = 25cm^2$

9. (a) $C = 37.68\ cm,$ $A = 113.04\ cm^2$ (b) $P = 30.84\ cm,$ $A = 56.52\ cm^2$

Year 8 Retention Sheet A26

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{7}{10}+2\frac{3}{11}=$ (b) $3\frac{1}{6}-2\frac{3}{4}=$

(c) $1\frac{9}{11}\times 1\frac{5}{6}=$ (d) $1\frac{9}{10}\div 1\frac{1}{4}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=5, a=$ - 1 & $t=5,$ (b) $u=5.9, a=3.9$ & $t=7$

3. Expand and Simplify:

(a) $-6(7x+3)=$ (b) $2-8(5x-6)=$

(c) $-3(x+8)-2(x-4)=$ (d) $-3x(2x-9)-2(x-2)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 70:90 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$112$. They divide the money on the ration $3:5$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $2:5:6$ respectively. If she uses $68\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	3
3	5
4	7
5	4

x	Frequency
1	0
2	5
3	5
4	7
5	3

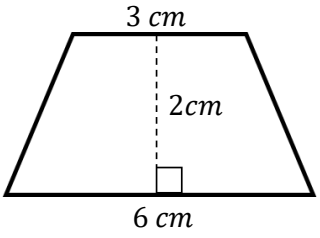
7. Solve:

(a) $-8x-7=-39$ (b) $-7x+17=7x-20$

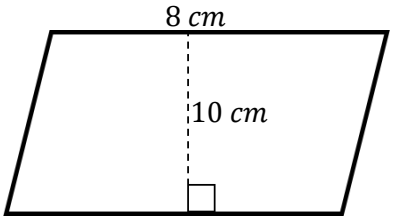
(c) $5(3x-3)=-4x+4$ (d) $-5(2x+3)=-2(3x-8)$

8. Find the area of the trapezium and parallelogram.

(a)

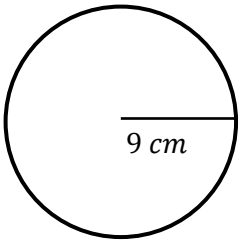


(b)

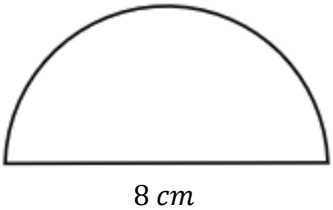


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A26

1. (a) $\frac{437}{110}$ (b) $\frac{5}{12}$

(c) $\frac{10}{3}$ (d) $\frac{38}{25}$

2. (a) $s = -18$ (b) $s = 119$

3. (a) $-42x - 18$ (b) $-40x + 50$

(c) $-40x + 50$ (d) $-6x^2 + 25x + 4$

4. (a) See quadrilaterals sheet

5. (a) $70:90$ (b) Bill gets \$42 and Ben gets \$70 (c) 170 ml of apple and 204 ml of pineapple

6. (a) 3.50 (b) 3.40

7. (a) $x = 4$ (b) $x = 37/14$

(c) $x = 1$ (d) $x = -31/4$

8. (a) $Area = 9\ cm^2$ (b) $Area = 80cm^2$

9. (a) $C = 56.52\ cm,$ $A = 254.34\ cm^2$ (b) $P = 20.56\ cm,$ $A = 25.12\ cm^2$

Year 8 Retention Sheet A27

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{1}{2}+2\frac{8}{9}=$ (b) $1\frac{6}{11}-1\frac{4}{5}=$

(c) $1\frac{3}{7}\times 3\frac{1}{4}=$ (d) $2\frac{8}{11}\div 3\frac{2}{3}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=$ - $3, a=$ - 3 & $t=8,$ (b) $u=$ - $7.7, a=$ - 5.6 & $t=10$

3. Expand and Simplify:

(a) $2(1x+9)=$ (b) $8+8(9x+3)=$

(c) $8(2x+7)+4(3x+9)=$ (d) $-3x(3x-9)+6(2x-7)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 11:66 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$63$. They divide the money on the ration $4:3$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $4:7:2$ respectively. If she uses $16\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	3
3	4
4	8
5	5

x	Frequency
1	0
2	3
3	4
4	7
5	6

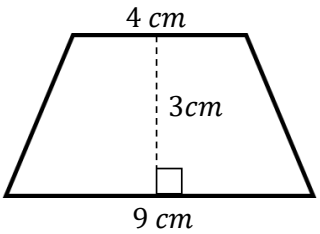
7. Solve:

(a) $4x+2=-26$ (b) $6x-7=8x-3$

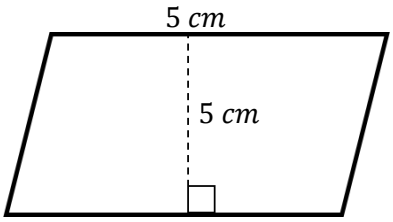
(c) $-2(-2x+9)=-x+3$ (d) $3(-5x+2)=-3(-3x+5)$

8. Find the area of the trapezium and parallelogram.

(a)

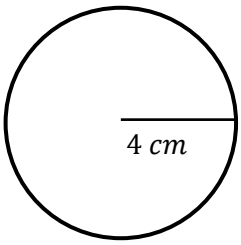


(b)

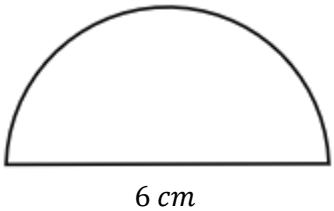


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A27

1. (a) $\frac{79}{18}$ (b) $\frac{-14}{55}$

(c) $\frac{65}{14}$ (d) $\frac{90}{121}$

2. (a) $s = -87$ (b) $s = -237$

3. (a) $2x + 18$ (b) $72x + 32$

(c) $72x + 32$ (d) $-9x^2 + 39x - 42$

4. (a) See quadrilaterals sheet

5. (a) $11:66$ (b) Bill gets \$36 and Ben gets \$27 (c) 28 ml of apple and 8 ml of pineapple

6. (a) 3.75 (b) 3.80

7. (a) $x = -7$ (b) $x = -2$

(c) $x = 21/5$ (d) $x = 7/8$

8. (a) $Area = 19.5\ cm^2$ (b) $Area = 25cm^2$

9. (a) $C = 25.12\ cm,$ $A = 50.24\ cm^2$ (b) $P = 15.42\ cm,$ $A = 14.13\ cm^2$

Year 8 Retention Sheet A28

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{1}{10}+3\frac{1}{2}=$ (b) $2\frac{1}{2}-3\frac{10}{11}=$

(c) $1\frac{7}{8}\times 3\frac{1}{7}=$ (d) $1\frac{4}{9}\div 3\frac{5}{6}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=5, a=3$ & $t=5$, (b) $u=5.9, a=$ - 0.6 & $t=9$

3. Expand and Simplify:

(a) $8(3x+7)=$ (b) $-8+3(4x+8)=$

(c) $8(4x+3)+6(5x-3)=$ (d) $6x(2x-9)+5(5x-8)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 28:49 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$45$. They divide the money on the ration $1:2$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $5:1:3$ respectively. If she uses $125\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	3
3	6
4	8
5	4

x	Frequency
1	1
2	4
3	6
4	8
5	1

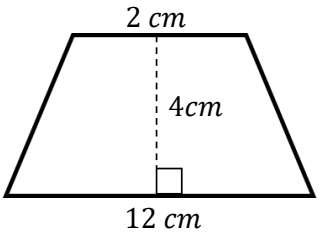
7. Solve:

(a) $4x-8=-16$ (b) $3x+20=-x-16$

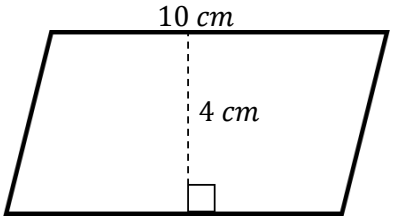
(c) $5(-4x+4)=4x+3$ (d) $-4(4x-8)=2(-5x+2)$

8. Find the area of the trapezium and parallelogram.

(a)

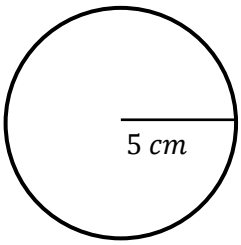


(b)

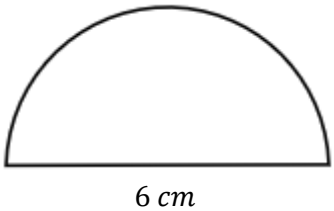


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A28

1. (a) $\frac{23}{5}$ (b) $\frac{-31}{22}$

(c) $\frac{165}{28}$ (d) $\frac{26}{69}$

2. (a) $s = 53$ (b) $s = -28$

3. (a) $24x + 56$ (b) $12x + 16$

(c) $12x + 16$ (d) $12x^2 - 29x - 40$

4. (a) See quadrilaterals sheet

5. (a) $28:49$ (b) Bill gets \$15 and Ben gets \$30 (c) 25 ml of apple and 75 ml of pineapple

6. (a) 3.55 (b) 3.20

7. (a) $x = -2$ (b) $x = -9$

(c) $x = 17/24$ (d) $x = 14/3$

8. (a) $Area = 28\ cm^2$ (b) $Area = 40cm^2$

9. (a) $C = 31.40\ cm,$ $A = 78.50\ cm^2$ (b) $P = 15.42\ cm,$ $A = 14.13\ cm^2$

Year 8 Retention Sheet A29

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $3\frac{2}{7}+2\frac{1}{3}=$ (b) $2\frac{10}{11}-2\frac{5}{12}=$

(c) $2\frac{2}{3}\times 2\frac{1}{12}=$ (d) $2\frac{1}{4}\div 1\frac{3}{7}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=-8, a=-3 \ \& \ t=3,$ (b) $u=-2.7, a=7.9 \ \& \ t=10$

3. Expand and Simplify:

(a) $-1(9x-5)=$ (b) $-6+4(8x-2)=$

(c) $6(4x+7)+2(x+2)=$ (d) $3x(5x-3)+9(3x+1)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 5:15 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$182$. They divide the money on the ration $9:5$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $8:6:3$ respectively. If she uses $176\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	3
3	4
4	8
5	3

x	Frequency
1	1
2	5
3	4
4	7
5	3

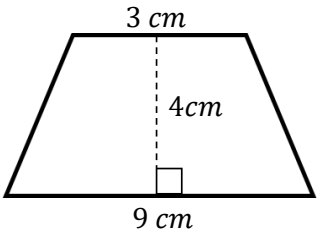
7. Solve:

(a) $-5x+8=23$ (b) $-4x-8=-5x+4$

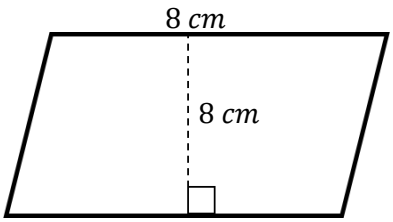
(c) $4(-3x-5)=-2x-7$ (d) $5(-3x-6)=5(-2x+9)$

8. Find the area of the trapezium and parallelogram.

(a)

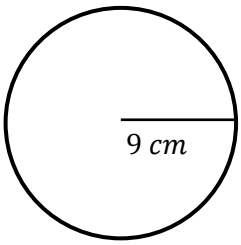


(b)

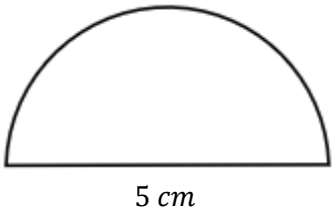


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A29

1. (a) $\frac{118}{21}$ (b) $\frac{65}{132}$

(c) $\frac{50}{9}$ (d) $\frac{63}{40}$

2. (a) $s = 11$ (b) $s = 374$

3. (a) $-9x + 5$ (b) $32x - 14$

(c) $32x - 14$ (d) $15x^2 + 18x + 9$

4. (a) See quadrilaterals sheet

5. (a) $5:15$ (b) Bill gets \$117 and Ben gets \$65 (c) $132\ ml$ of apple and $66\ ml$ of pineapple

6. (a) 3.45 (b) 3.30

7. (a) $x = -3$ (b) $x = 12$

(c) $x =$ −13/10 (d) $x = -15$

8. (a) $Area = 24\ cm^2$ (b) $Area = 64cm^2$

9. (a) $C = 56.52\ cm,$ $A = 254.34\ cm^2$ (b) $P = 12.85\ cm,$ $A = 9.81\ cm^2$

Year 8 Retention Sheet A30

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $2\frac{6}{7}+3\frac{1}{10}=$ (b) $1\frac{9}{11}-1\frac{1}{12}=$

(c) $3\frac{6}{7}\times 2\frac{4}{5}=$ (d) $3\frac{9}{10}\div 1\frac{4}{11}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=\ 4, a=$ - 2 & $t=3,$ (b) $u=$ - 5.1, $a=\ 3.4$ & $t=6$

3. Expand and Simplify:

(a) $7(1x-3)=$ (b) $-8+3(5x+1)=$

(c) $9(x-8)-1(4x+2)=$ (d) $-9x(3x+7)-8(2x+1)=$

4. Draw a sketch of a **kite** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 45:10 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$171$. They divide the money on the ration $1:8$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $4:4:3$ respectively. If she uses $64\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	3
3	5
4	8
5	4

x	Frequency
1	1
2	5
3	5
4	8
5	1

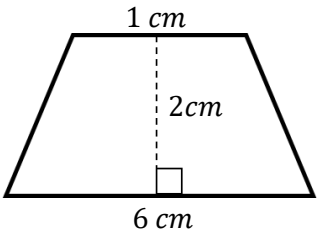
7. Solve:

(a) $-x+5=7$ (b) $6x+6=4x-20$

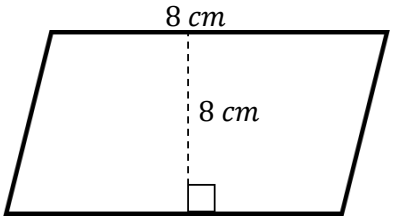
(c) $2(-5x-2)=5x+1$ (d) $3(-4x+2)=5(-5x+2)$

8. Find the area of the trapezium and parallelogram.

(a)

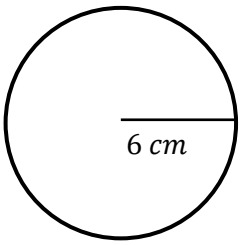


(b)

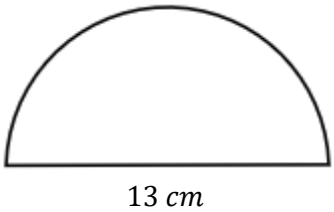


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A30

1. (a) $\frac{417}{70}$ (b) $\frac{97}{132}$

(c) $\frac{54}{5}$ (d) $\frac{143}{50}$

2. (a) $s = -17$ (b) $s = 44$

3. (a) $7x - 21$ (b) $15x - 5$

(c) $15x - 5$ (d) $-27x^2 - 79x - 8$

4. (a) See quadrilaterals sheet

5. (a) $45:10$ (b) Bill gets \$19 and Ben gets \$152 (c) $64\ ml$ of apple and $48\ ml$ of pineapple

6. (a) 3.65 (b) 3.15

7. (a) $x = -2$ (b) $x = -13$

(c) $x = -1/3$ (d) $x = 4/13$

8. (a) $Area = 7\ cm^2$ (b) $Area = 64cm^2$

9. (a) $C = 37.68\ cm,$ $A = 113.04\ cm^2$ (b) $P = 33.41\ cm,$ $A = 66.33\ cm^2$

Year 8 Retention Sheet A31

1. Calculate leaving your answer as an improper fraction in its simplest form.

$(a)\quad 3\frac{1}{4}+2\frac{4}{5}=$ $(b)\quad 2\frac{7}{8}-1\frac{10}{11}=$

$(c)\quad 2\frac{2}{9}\times 1\frac{1}{2}=$ $(d)\quad 3\frac{7}{10}\div 1\frac{8}{9}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

$(a)\quad u=2, a=9 \;\&\; t=6,$ $(b)\quad u=\text{-}9.3, a=8.9 \;\&\; t=2$

3. Expand and Simplify:

$(a)\quad -1(6x+8)=$ $(b)\quad -6+8(4x+9)=$

$(c)\quad -7(4x-6)-9(4x-4)=$ $(d)\quad 3x(4x-2)+6(4x-3)=$

4. Draw a sketch of a **trapezium** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 12:15 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$85$. They divide the money on the ration $3:2$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $8:4:7$ respectively. If she uses $48\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	3
3	6
4	7
5	5

x	Frequency
1	0
2	3
3	6
4	8
5	3

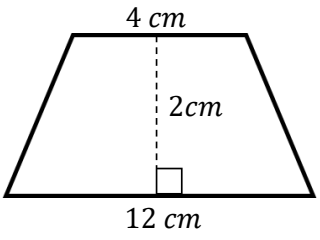
7. Solve:

$(a)\quad 3x-7=2$ $(b)\quad -5x-5=6x-20$

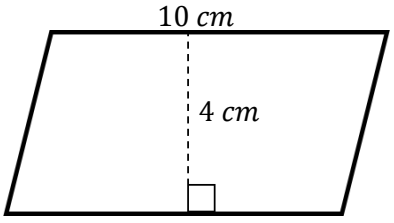
$(c)\quad -(2x+7)=4x-7$ $(d)\quad 4(-2x-2)=4(-3x+7)$

8. Find the area of the trapezium and parallelogram.

(a)

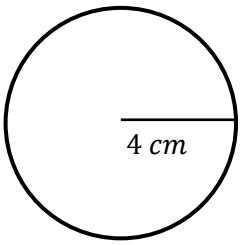


(b)

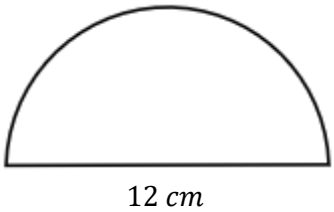


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A31

1. (a) $\frac{121}{20}$ (b) $\frac{85}{88}$

(c) $\frac{10}{3}$ (d) $\frac{333}{170}$

2. (a) $s = 180$ (b) s = -65

3. (a) $-6x - 8$ (b) $32x + 66$

(c) $32x + 66$ (d) $12x^2 + 18x - 18$

4. (a) See quadrilaterals sheet

5. (a) $12:15$ (b) Bill gets \$51 and Ben gets \$34 (c) 24 ml of apple and 42 ml of pineapple

6. (a) 3.70 (b) 3.55

7. (a) $x = 3$ (b) $x = 15/11$

(c) $x = 0$ (d) $x = 9$

8. (a) $Area = 16\ cm^2$ (b) $Area = 40cm^2$

9. (a) $C = 25.12\ cm,$ $A = 50.24\ cm^2$ (b) $P = 30.84\ cm,$ $A = 56.52\ cm^2$

Year 8 Retention Sheet A32

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{7}{10}+2\frac{7}{11}=$ (b) $3\frac{5}{7}-1\frac{2}{3}=$

(c) $2\frac{10}{11}\times 2\frac{1}{5}=$ (d) $3\frac{2}{5}\div 2\frac{1}{3}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=5, a=9$ & $t=3,$ (b) $u=$ - $6.3, a=4.1$ & $t=8$

3. Expand and Simplify:

(a) $8(9x-7)=$ (b) $8+7(2x-4)=$

(c) $-9(4x-1)+3(4x+7)=$ (d) $2x(4x-5)-2(5x+6)=$

4. Draw a sketch of a **kite** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 40:32 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$115$. They divide the money on the ration $2:3$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $5:4:9$ respectively. If she uses $80\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	3
3	4
4	8
5	3

x	Frequency
1	0
2	5
3	4
4	7
5	4

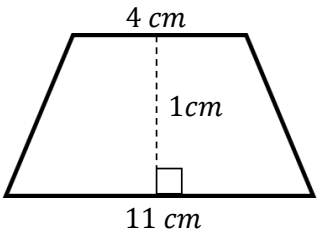
7. Solve:

(a) $9x+1=-44$ (b) $-3x+16=-2x+3$

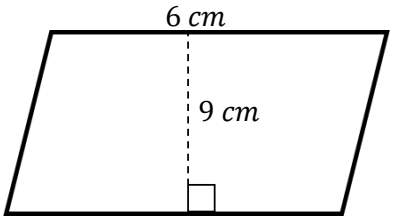
(c) $2(-3x-5)=5x+5$ (d) $-3(-3x-7)=-(-5x-1)$

8. Find the area of the trapezium and parallelogram.

(a)

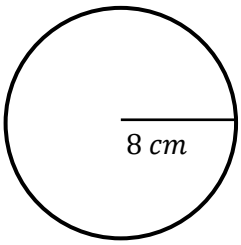


(b)

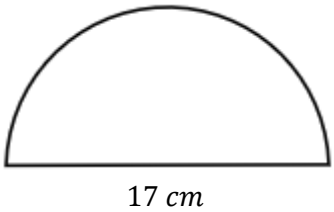


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A32

1. (a) $\frac{477}{110}$ (b) $\frac{43}{21}$

(c) $\frac{32}{5}$ (d) $\frac{51}{35}$

2. (a) $s = 86$ (b) $s = 105$

3. (a) $72x - 56$ (b) $14x - 20$

(c) $14x - 20$ (d) $8x^2 - 20x - 12$

4. (a) See quadrilaterals sheet

5. (a) $40:32$ (b) Bill gets \$46 and Ben gets \$69 (c) $64\ ml$ of apple and $144\ ml$ of pineapple

6. (a) 3.55 (b) 3.50

7. (a) $x = -5$ (b) $x = 13$

(c) $x = -15/11$ (d) $x = -5$

8. (a) $Area = 7.5\ cm^2$ (b) $Area = 54cm^2$

9. (a) $C = 50.24\ cm,$ $A = 200.96\ cm^2$ (b) $P = 43.69\ cm,$ $A = 113.43\ cm^2$

Year 8 Retention Sheet A33

1. Calculate leaving your answer as an improper fraction in its simplest form.

$(a)\quad 1\frac{1}{2}+1\frac{3}{7}=$ $(b)\quad 1\frac{4}{11}-3\frac{1}{2}=$

$(c)\quad 3\frac{3}{4}\times 2\frac{3}{8}=$ $(d)\quad 3\frac{7}{12}\div 1\frac{4}{11}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

$(a)\quad u=0, a=\text{-}5 \;\&\; t=3,$ $(b)\quad u=4.7, a=0.3 \;\&\; t=7$

3. Expand and Simplify:

$(a)\quad 7(7x-8)=$ $(b)\quad -2+9(8x+3)=$

$(c)\quad -8(x-9)+3(5x+3)=$ $(d)\quad -7x(3x-2)+4(5x-5)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 55:33 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$48$. They divide the money on the ration $1:3$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $2:9:6$ respectively. If she uses $62\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	4
3	4
4	8
5	3

x	Frequency
1	0
2	5
3	4
4	8
5	3

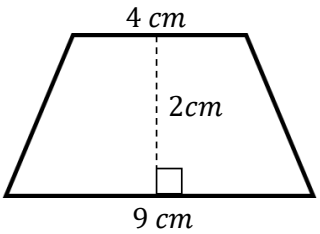
7. Solve:

$(a)\quad 4x-6=-38$ $(b)\quad -8x+20=-7x-16$

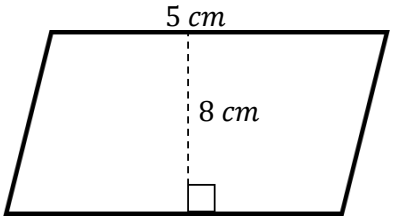
$(c)\quad 4(2x+5)=-5x-7$ $(d)\quad 5(-5x+7)=-5(-3x-8)$

8. Find the area of the trapezium and parallelogram.

(a)

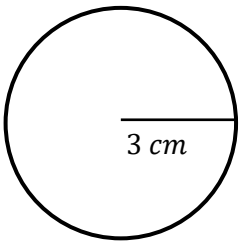


(b)

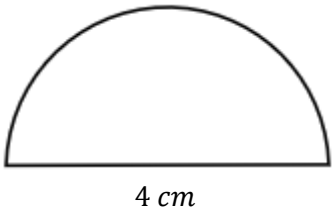


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A33

1. (a) $\frac{41}{14}$ (b) $\frac{-47}{22}$

(c) $\frac{285}{32}$ (d) $\frac{473}{180}$

2. (a) $s = -23$ (b) $s = 9$

3. (a) $49x - 56$ (b) $72x + 25$

(c) $72x + 25$ (d) $-21x^2 + 34x - 20$

4. (a) See quadrilaterals sheet

5. (a) $55:33$ (b) Bill gets \$12 and Ben gets \$36 (c) $279\ ml$ of apple and $186\ ml$ of pineapple

6. (a) 3.40 (b) 3.45

7. (a) $x = -8$ (b) $x = 36$

(c) $x = -27/13$ (d) $x = -1/8$

8. (a) $Area = 13\ cm^2$ (b) $Area = 40cm^2$

9. (a) $C = 18.84\ cm,$ $A = 28.26\ cm^2$ (b) $P = 10.28\ cm,$ $A = 6.28\ cm^2$

Year 8 Retention Sheet A34

1. Calculate leaving your answer as an improper fraction in its simplest form.

$(a)\quad 3\frac{5}{7}+3\frac{1}{3}=$ $(b)\quad 1\frac{10}{11}-1\frac{4}{9}=$

$(c)\quad 2\frac{1}{3}\times 3\frac{3}{11}=$ $(d)\quad 3\frac{3}{4}\div 3\frac{2}{3}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

$(a)\quad u=6, a=8 \;\&\; t=2,$ $(b)\quad u=-3.7, a=6.6 \;\&\; t=7$

3. Expand and Simplify:

$(a)\quad -4(5x+2)=$ $(b)\quad -2-3(5x+3)=$

$(c)\quad 3(2x-7)-8(5x+7)=$ $(d)\quad -4x(3x-5)+3(x-8)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 5:40 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$102$. They divide the money on the ration $9:8$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $9:9:5$ respectively. If she uses $261\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	3
3	6
4	7
5	3

x	Frequency
1	1
2	4
3	6
4	7
5	2

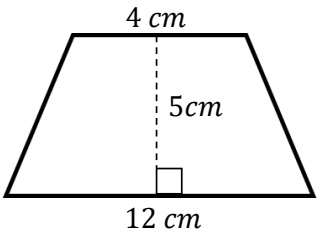
7. Solve:

$(a)\quad -3x-9=-15$ $(b)\quad 8x-2=-9x+3$

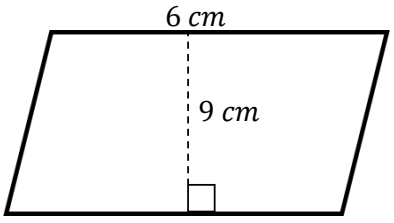
$(c)\quad -2(5x-5)=3x-1$ $(d)\quad 4(-4x+4)=-(2x+8)$

8. Find the area of the trapezium and parallelogram.

(a)

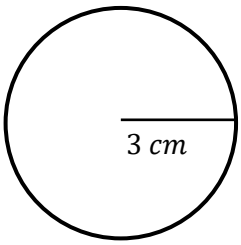


(b)

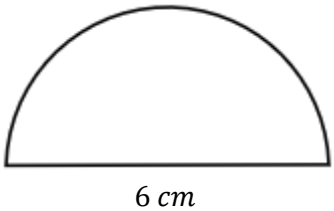


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A34

1. (a) $\frac{148}{21}$ (b) $\frac{46}{99}$

(c) $\frac{84}{11}$ (d) $\frac{45}{44}$

2. (a) $s = 64$ (b) $s = 137$

3. (a) $-20x - 8$ (b) $-15x - 11$

(c) $-15x - 11$ (d) $-12x^2 + 23x - 24$

4. (a) See quadrilaterals sheet

5. (a) $5:40$ (b) Bill gets $\$54$ and Ben gets $\$48$ (c) $261\ ml$ of apple and $145\ ml$ of pineapple

6. (a) 3.40 (b) 3.25

7. (a) $x = 2$ (b) $x = 5/17$

(c) $x = 11/13$ (d) $x = 12/7$

8. (a) $Area = 40\ cm^2$ (b) $Area = 54cm^2$

9. (a) $C = 18.84\ cm,$ $A = 28.26\ cm^2$ (b) $P = 15.42\ cm,$ $A = 14.13\ cm^2$

Year 8 Retention Sheet A35

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $3\frac{3}{4}+3\frac{1}{3}=$ (b) $2\frac{7}{11}-3\frac{2}{3}=$

(c) $2\frac{2}{11}\times 1\frac{4}{5}=$ (d) $2\frac{2}{5}\div 3\frac{1}{6}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=$ - $1, a=$ 3 & $t=6,$ (b) $u=$ - $0.6, a=$ 4.7 & $t=2$

3. Expand and Simplify:

(a) $4(3x-4)=$ (b) $7-1(2x-5)=$

(c) $-7(4x+5)-7(x-6)=$ (d) $9x(x+8)+5(3x+7)=$

4. Draw a sketch of a **kite** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 35:56 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$60$. They divide the money on the ration $2:3$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $9:5:3$ respectively. If she uses $144\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	4
3	4
4	8
5	2

x	Frequency
1	0
2	3
3	4
4	8
5	5

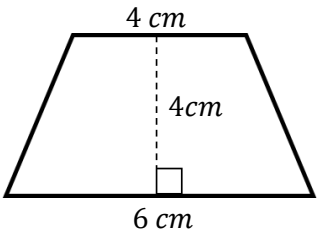
7. Solve:

(a) $8x-4=20$ (b) $-6x+17=3x+8$

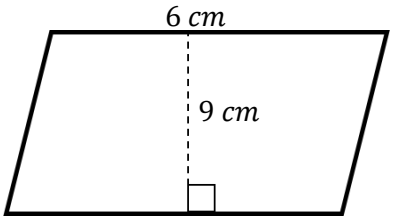
(c) $-(-3x-9)=4x+8$ (d) $-(2x-1)=2(-2x+8)$

8. Find the area of the trapezium and parallelogram.

(a)

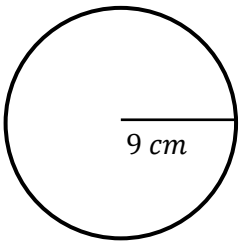


(b)

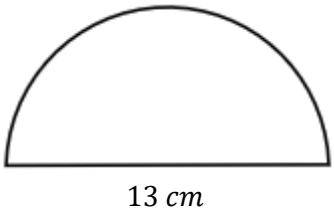


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A35

1. (a) $\frac{85}{12}$ (b) $\frac{-34}{33}$

(c) $\frac{216}{55}$ (d) $\frac{72}{95}$

2. (a) $s = 51$ (b) $s = 7$

3. (a) $12x - 16$ (b) $-2x + 12$

(c) $-2x + 12$ (d) $9x^2 + 87x + 35$

4. (a) See quadrilaterals sheet

5. (a) $35:56$ (b) Bill gets $\$24$ and Ben gets $\$36$ (c) $80\ ml$ of apple and $48\ ml$ of pineapple

6. (a) 3.40 (b) 3.75

7. (a) $x = 3$ (b) $x = 1$

(c) $x = 1$ (d) $x = 15/2$

8. (a) $Area = 20\ cm^2$ (b) $Area = 54cm^2$

9. (a) $C = 56.52\ cm,$ $A = 254.34\ cm^2$ (b) $P = 33.41\ cm,$ $A = 66.33\ cm^2$

Year 8 Retention Sheet A36

1. Calculate leaving your answer as an improper fraction in its simplest form.

$(a)\quad 2\frac{10}{11}+1\frac{9}{10}=$ $(b)\quad 1\frac{1}{6}-1\frac{7}{12}=$

$(c)\quad 2\frac{4}{9}\times 2\frac{5}{6}=$ $(d)\quad 1\frac{4}{5}\div 3\frac{5}{8}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

$(a)\quad u=6, a=8 \ \&\ t=7,$ $(b)\quad u=\text{-}1.3, a=\text{-}2.7 \ \&\ t=4$

3. Expand and Simplify:

$(a)\quad -2(4x+3)=$ $(b)\quad -2-2(9x-1)=$

$(c)\quad 7(2x+2)-7(x+6)=$ $(d)\quad 5x(x+1)-6(3x+6)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 16:4 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$48$. They divide the money on the ration $2:1$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $1:2:2$ respectively. If she uses $36\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	4
3	5
4	7
5	3

x	Frequency
1	1
2	3
3	5
4	7
5	4

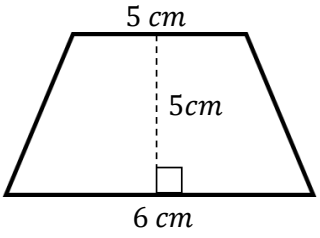
7. Solve:

$(a)\quad -9x-4=-13$ $(b)\quad 5x+1=-4x-9$

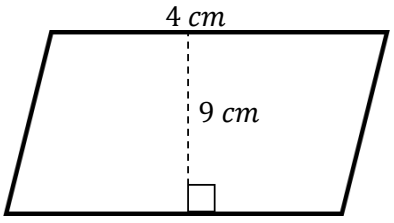
$(c)\quad -(4x+8)=2x+1$ $(d)\quad -3(-3x+6)=-(-4x-5)$

8. Find the area of the trapezium and parallelogram.

(a)

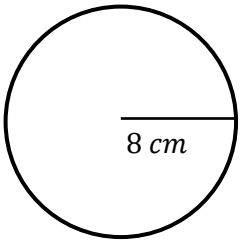


(b)

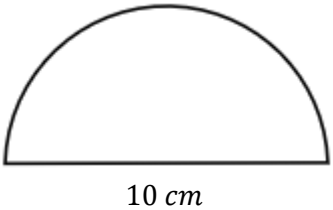


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A36

1. (a) $\frac{529}{110}$ (b) $\frac{-5}{12}$

(c) $\frac{187}{27}$ (d) $\frac{72}{145}$

2. (a) $s = 244$ (b) s = -18

3. (a) $-8x - 6$ (b) $-18x$

(c) $-18x$ (d) $5x^2 - 13x - 36$

4. (a) See quadrilaterals sheet

5. (a) $16:4$ (b) Bill gets \$32 and Ben gets \$16 (c) 72 ml of apple and 72 ml of pineapple

6. (a) 3.45 (b) 3.50

7. (a) $x = 1$ (b) $x = -10/9$

(c) x = –3/2 (d) x = 23/5

8. (a) $Area = 27.5\ cm^2$ (b) $Area = 36cm^2$

9. (a) $C = 50.24\ cm,$ $A = 200.96\ cm^2$ (b) $P = 25.70\ cm,$ $A = 39.25\ cm^2$

Year 8 Retention Sheet A37

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{7}{9}+2\frac{5}{6}=$ (b) $1\frac{3}{10}-3\frac{2}{3}=$

(c) $1\frac{1}{2}\times 2\frac{1}{4}=$ (d) $3\frac{8}{11}\div 2\frac{1}{8}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=5, a=8 \,\&\, t=7,$ (b) $u=$ - 4.7, $a=$ - 7.0 $\&\, t=9$

3. Expand and Simplify:

(a) $3(4x-1)=$ (b) $6-7(5x+6)=$

(c) $-7(4x+5)-2(4x+9)=$ (d) $5x(4x-7)+9(5x+3)=$

4. Draw a sketch of a **kite** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 5:10 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$180$. They divide the money on the ration $8:7$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $3:7:2$ respectively. If she uses $84\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	4
3	5
4	7
5	5

x	Frequency
1	0
2	5
3	5
4	7
5	3

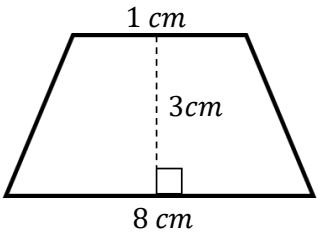
7. Solve:

(a) $-8x-9=-1$ (b) $-3x-12=-2x-1$

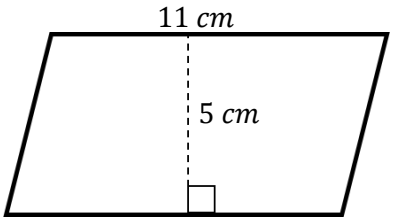
(c) $4(2x-7)=-4x+8$ (d) $3(4x+5)=5(5x-3)$

8. Find the area of the trapezium and parallelogram.

(a)

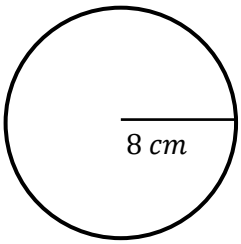


(b)

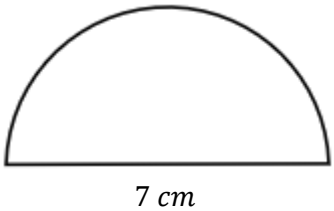


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A37

1. (a) $\frac{83}{18}$ (b) $\frac{-71}{30}$

(c) $\frac{27}{8}$ (d) $\frac{328}{187}$

2. (a) $s = 236$ (b) s = -251

3. (a) $12x - 3$ (b) $-35x - 36$

(c) $-35x - 36$ (d) $20x^2 + 10x + 27$

4. (a) See quadrilaterals sheet

5. (a) $5:10$ (b) Bill gets \$96 and Ben gets \$84 (c) 196 ml of apple and 56 ml of pineapple

6. (a) 3.65 (b) 3.40

7. (a) $x = -1$ (b) $x = -11$

(c) $x = 3$ (d) x = 30/13

8. (a) $Area = 13.5\ cm^2$ (b) $Area = 55cm^2$

9. (a) $C = 50.24\ cm,$ $A = 200.96\ cm^2$ (b) $P = 17.99\ cm,$ $A = 19.23\ cm^2$

Year 8 Retention Sheet A38

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $3\frac{4}{5}+3\frac{2}{3}=$ (b) $2\frac{2}{5}-3\frac{7}{10}=$

(c) $2\frac{1}{4}\times 3\frac{10}{11}=$ (d) $2\frac{2}{5}\div 2\frac{6}{11}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=7, a=-5 \ \& \ t=3,$ (b) $u=9.8, a=-1.7 \ \& \ t=8$

3. Expand and Simplify:

(a) $-4(7x+8)=$ (b) $-3-8(9x-4)=$

(c) $-2(x+1)-4(2x+1)=$ (d) $5x(x-7)-2(2x+9)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 28:7 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$60$. They divide the money on the ration $2:1$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $4:7:1$ respectively. If she uses $56\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	4
3	5
4	7
5	3

x	Frequency
1	1
2	5
3	5
4	7
5	2

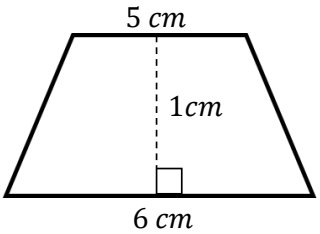
7. Solve:

(a) $7x+5=19$ (b) $5x-3=-x-7$

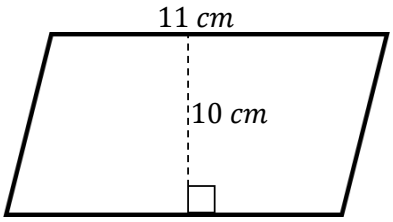
(c) $-3(-5x-5)=-3x-3$ (d) $-3(5x-2)=-4(4x+7)$

8. Find the area of the trapezium and parallelogram.

(a)

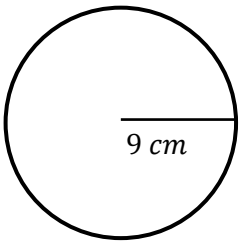


(b)

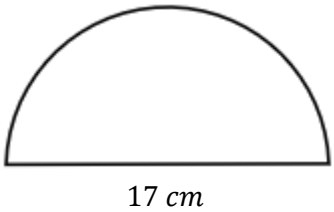


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A38

1. (a) $\frac{112}{15}$ (b) $\frac{-13}{10}$

(c) $\frac{387}{44}$ (d) $\frac{33}{35}$

2. (a) $s = -58$ (b) $s = -71$

3. (a) $-28x - 32$ (b) $-72x + 29$

(c) $-72x + 29$ (d) $5x^2 - 39x - 18$

4. (a) See quadrilaterals sheet

5. (a) $28:7$ (b) Bill gets \$40 and Ben gets \$20 (c) $98\ ml$ of apple and $14\ ml$ of pineapple

6. (a) 3.45 (b) 3.20

7. (a) $x = 2$ (b) $x = -2/3$

(c) $x = -1$ (d) $x = -34$

8. (a) $Area = 5.5\ cm^2$ (b) $Area = 110 cm^2$

9. (a) $C = 56.52\ cm,$ $A = 254.34\ cm^2$ (b) $P = 43.69\ cm,$ $A = 113.43\ cm^2$

Year 8 Retention Sheet A39

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{1}{5}+2\frac{2}{7}=$ (b) $2\frac{3}{4}-1\frac{10}{11}=$

(c) $1\frac{9}{10}\times 1\frac{8}{9}=$ (d) $1\frac{2}{5}\div 3\frac{9}{11}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=5, a=-9 \ \& \ t=9,$ (b) $u=-9.6, a=5.4 \ \& \ t=8$

3. Expand and Simplify:

(a) $7(2x-5)=$ (b) $8-2(7x-1)=$

(c) $5(2x-8)+7(4x+1)=$ (d) $-7x(5x+5)+3(3x-6)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 12:42 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$104$. They divide the money on the ration $7:6$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $3:2:9$ respectively. If she uses $54\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	4
3	5
4	7
5	3

x	Frequency
1	0
2	5
3	5
4	7
5	3

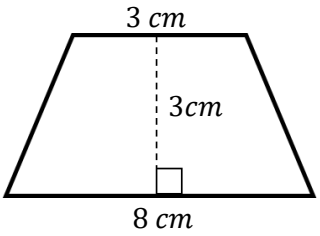
7. Solve:

(a) $-6x-2=-26$ (b) $5x+3=3x-17$

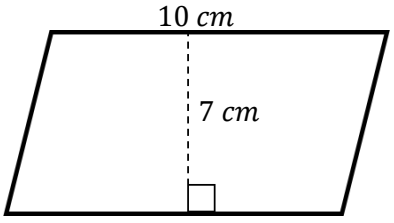
(c) $-4(4x-2)=-5x+3$ (d) $4(-4x+8)=-2(3x-4)$

8. Find the area of the trapezium and parallelogram.

(a)

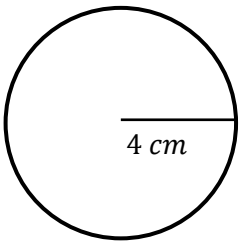


(b)

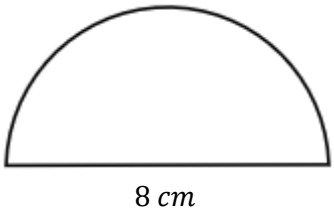


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A39

1. (a) $\frac{122}{35}$ (b) $\frac{37}{44}$

(c) $\frac{323}{90}$ (d) $\frac{11}{30}$

2. (a) $s = -410$ (b) $s = 121$

3. (a) $14x - 35$ (b) $-14x + 10$

(c) $-14x + 10$ (d) $-35x^2 - 26x - 18$

4. (a) See quadrilaterals sheet

5. (a) $12:42$ (b) Bill gets \$56 and Ben gets \$48 (c) 36 ml of apple and 162 ml of pineapple

6. (a) 3.35 (b) 3.40

7. (a) $x = 4$ (b) $x = -10$

(c) $x = 5/11$ (d) $x = 12/5$

8. (a) $Area = 16.5\ cm^2$ (b) $Area = 70cm^2$

9. (a) $C = 25.12\ cm,$ $A = 50.24\ cm^2$ (b) $P = 20.56\ cm,$ $A = 25.12\ cm^2$

Year 8 Retention Sheet A40

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{10}{11}+1\frac{3}{4}=$ (b) $3\frac{1}{9}-1\frac{10}{11}=$

(c) $2\frac{8}{9}\times 2\frac{3}{8}=$ (d) $1\frac{7}{12}\div 3\frac{7}{10}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=$ - $7, a=$ - 8 & $t=5,$ (b) $u=$ - $8.6, a=$ 1.4 & $t=2$

3. Expand and Simplify:

(a) $3(4x-2)=$ (b) $5-3(8x-9)=$

(c) $-7(2x-6)-1(3x-3)=$ (d) $-3x(3x-5)-8(5x+9)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 36:27 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$80$. They divide the money on the ration $3:2$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $2:7:3$ respectively. If she uses $68\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	5
3	5
4	8
5	1

x	Frequency
1	0
2	5
3	5
4	7
5	3

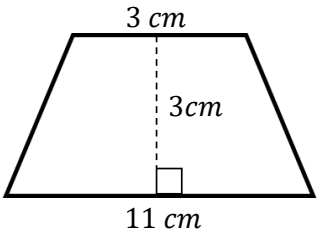
7. Solve:

(a) $4x+1=29$ (b) $-9x-7=-4x-17$

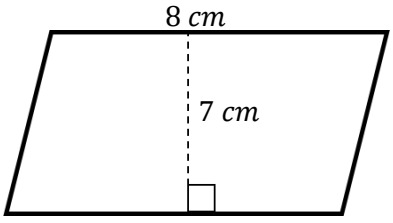
(c) $-4(-5x+9)=5x+5$ (d) $-(3x-2)=-3(-5x+4)$

8. Find the area of the trapezium and parallelogram.

(a)

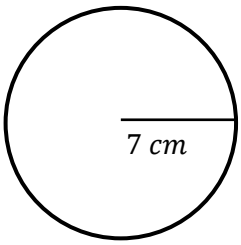


(b)

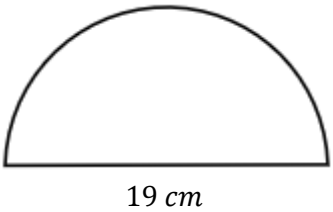


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A40

1. (a) $\frac{161}{44}$ (b) $\frac{119}{99}$

(c) $\frac{247}{36}$ (d) $\frac{95}{222}$

2. (a) $s = -44$ (b) $s = -9$

3. (a) $12x - 6$ (b) $-24x + 32$

(c) $-24x + 32$ (d) $-9x^2 - 25x - 72$

4. (a) See quadrilaterals sheet

5. (a) $36:27$ (b) Bill gets \$48 and Ben gets \$32 (c) 238 ml of apple and 102 ml of pineapple

6. (a) 3.25 (b) 3.40

7. (a) $x = 7$ (b) $x = 2$

(c) $x = 41/15$ (d) $x = 7/9$

8. (a) $Area = 21\ cm^2$ (b) $Area = 56cm^2$

9. (a) $C = 43.96\ cm,$ $A = 153.86\ cm^2$ (b) $P = 48.83\ cm,$ $A = 141.69\ cm^2$

Year 8 Retention Sheet A41

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{2}{3}+3\frac{3}{8}=$ (b) $2\frac{5}{12}-2\frac{3}{4}=$

(c) $3\frac{7}{12}\times 2\frac{4}{11}=$ (d) $3\frac{1}{3}\div 2\frac{4}{7}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=$ - $4, a=$ - 9 & $t=8,$ (b) $u=$ - $0.8, a=$ 3.5 & $t=8$

3. Expand and Simplify:

(a) $-3(9x+2)=$ (b) $-5-5(4x+9)=$

(c) $7(3x+6)+5(4x+3)=$ (d) $2x(3x-8)+7(3x-5)=$

4. Draw a sketch of a **kite** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 6:4 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$72$. They divide the money on the ration $1:3$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $1:1:7$ respectively. If she uses $4\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	5
3	5
4	7
5	2

x	Frequency
1	0
2	3
3	5
4	8
5	4

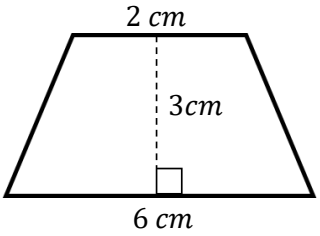
7. Solve:

(a) $4x-7=-31$ (b) $-9x+7=-x-6$

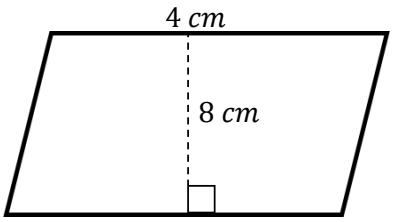
(c) $3(3x+8)=5x-4$ (d) $-4(-2x-1)=-(2x-1)$

8. Find the area of the trapezium and parallelogram.

(a)

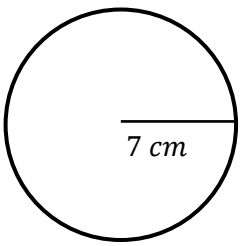


(b)

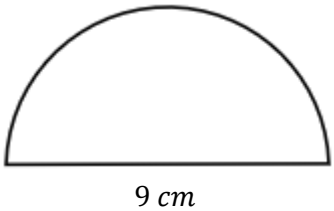


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A41

1. (a) $\frac{121}{24}$ (b) $\frac{-1}{3}$

(c) $\frac{559}{66}$ (d) $\frac{35}{27}$

2. (a) $s = -252$ (b) $s = 109$

3. (a) $-27x - 6$ (b) $-20x - 50$

(c) $-20x - 50$ (d) $6x^2 + 5x - 35$

4. (a) See quadrilaterals sheet

5. (a) $6:4$ (b) Bill gets $\$18$ and Ben gets $\$54$ (c) $4\ ml$ of apple and $28\ ml$ of pineapple

6. (a) 3.20 (b) 3.65

7. (a) $x = -6$ (b) $x = 13/8$

(c) $x = -7$ (d) $x = -3/10$

8. (a) $Area = 12\ cm^2$ (b) $Area = 32cm^2$

9. (a) $C = 43.96\ cm,$ $A = 153.86\ cm^2$ (b) $P = 23.13\ cm,$ $A = 31.79\ cm^2$

Year 8 Retention Sheet A42

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $3\frac{5}{6}+3\frac{2}{3}=$ (b) $1\frac{3}{5}-3\frac{5}{12}=$

(c) $2\frac{4}{9}\times 1\frac{9}{11}=$ (d) $2\frac{9}{11}\div 1\frac{4}{5}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=9, a=10$ & $t=8$, (b) $u=$ - 7.4, $a=$ - 8.9 & $t=6$

3. Expand and Simplify:

(a) $-4(7x+7)=$ (b) $3+7(3x-6)=$

(c) $3(4x-7)+9(4x-3)=$ (d) $-4x(2x+2)-4(x+7)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 42:30 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$169$. They divide the money on the ration $5:8$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $6:1:9$ respectively. If she uses $24\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	4
3	4
4	7
5	4

x	Frequency
1	1
2	3
3	4
4	7
5	5

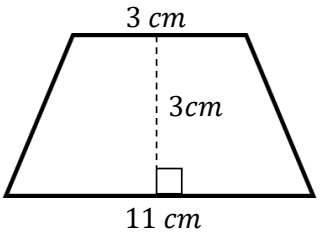
7. Solve:

(a) $6x-5=-53$ (b) $-8x-3=4x-19$

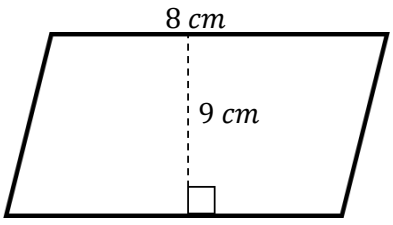
(c) $-2(-5x+6)=-2x+4$ (d) $2(3x-5)=-4(-5x+6)$

8. Find the area of the trapezium and parallelogram.

(a)

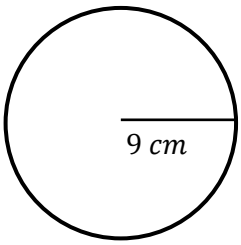


(b)

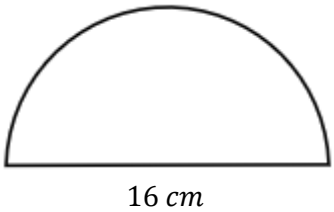


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A42

1. (a) $\frac{15}{2}$ (b) $\frac{-109}{60}$

(c) $\frac{40}{9}$ (d) $\frac{155}{99}$

2. (a) $s = 410$ (b) s = -94

3. (a) $-28x - 28$ (b) $21x - 39$

(c) $21x - 39$ (d) $-8x^2 - 12x - 28$

4. (a) See quadrilaterals sheet

5. (a) $42:30$ (b) Bill gets \$65 and Ben gets \$104 (c) $4\ ml$ of apple and $36\ ml$ of pineapple

6. (a) 3.55 (b) 3.60

7. (a) $x = -8$ (b) $x = 4/3$

(c) $x = 4/3$ (d) $x = 1$

8. (a) $Area = 21\ cm^2$ (b) $Area = 72cm^2$

9. (a) $C = 56.52\ cm,$ $A = 254.34\ cm^2$ (b) $P = 41.12\ cm,$ $A = 100.48\ cm^2$

Year 8 Retention Sheet A43

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $3\frac{2}{3}+1\frac{8}{11}=$ (b) $1\frac{7}{11}-3\frac{5}{12}=$

(c) $2\frac{1}{2}\times 2\frac{1}{12}=$ (d) $1\frac{5}{11}\div 2\frac{1}{2}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=4, a=-2 \ \& \ t=5,$ (b) $u=4.1, a=7.3 \ \& \ t=8$

3. Expand and Simplify:

(a) $-8(6x+8)=$ (b) $4-1(3x-5)=$

(c) $8(x-9)+3(4x-3)=$ (d) $-1x(5x-3)+3(5x-5)=$

4. Draw a sketch of a **trapezium** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 25:15 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$60$. They divide the money on the ration $4:1$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $3:5:3$ respectively. If she uses $21\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	5
3	4
4	7
5	1

x	Frequency
1	0
2	4
3	4
4	7
5	5

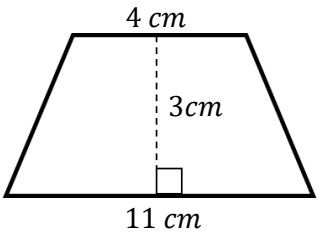
7. Solve:

(a) $-8x+5=53$ (b) $7x+10=9x-3$

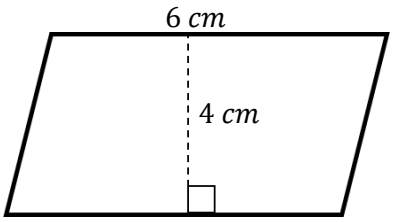
(c) $-4(-3x-9)=-5x-2$ (d) $-3(-3x+8)=-2(3x+3)$

8. Find the area of the trapezium and parallelogram.

(a)

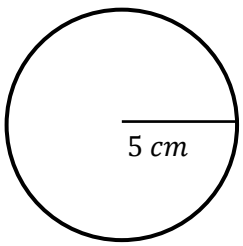


(b)

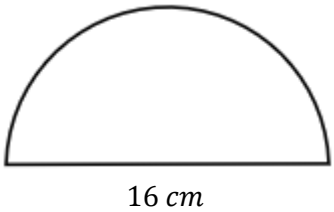


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A43

1. (a) $\frac{178}{33}$ (b) $\frac{-235}{132}$

(c) $\frac{125}{24}$ (d) $\frac{32}{55}$

2. (a) $s = -33$ (b) $s = 264$

3. (a) $-48x - 64$ (b) $-3x + 9$

(c) $-3x + 9$ (d) $-5x^2 + 18x - 15$

4. (a) See quadrilaterals sheet

5. (a) $25:15$ (b) Bill gets $\$48$ and Ben gets $\$12$ (c) $35\ ml$ of apple and $21\ ml$ of pineapple

6. (a) 3.10 (b) 3.65

7. (a) $x = -6$ (b) $x = 13/2$

(c) $x = -38/17$ (d) $x = 6/5$

8. (a) $Area = 22.5\ cm^2$ (b) $Area = 24cm^2$

9. (a) $C = 31.40\ cm,$ $A = 78.50\ cm^2$ (b) $P = 41.12\ cm,$ $A = 100.48\ cm^2$

Year 8 Retention Sheet A44

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $3\frac{3}{4}+3\frac{5}{11}=$ (b) $3\frac{2}{9}-1\frac{3}{4}=$

(c) $3\frac{3}{4}\times 3\frac{4}{11}=$ (d) $2\frac{9}{11}\div 1\frac{1}{5}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=3, a=7$ & $t=10,$ (b) $u=$ - 3.0, $a=$ - 5.3 & $t=4$

3. Expand and Simplify:

(a) $-7(8x-5)=$ (b) $7-2(5x+2)=$

(c) $3(3x+4)+5(4x+7)=$ (d) $-9x(3x+3)+3(5x-4)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 3:18 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$176$. They divide the money on the ration $6:5$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $4:9:2$ respectively. If she uses $28\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	3
3	6
4	8
5	2

x	Frequency
1	0
2	3
3	6
4	8
5	3

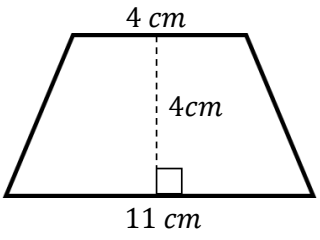
7. Solve:

(a) $-6x+1=-11$ (b) $-x-5=-2x-19$

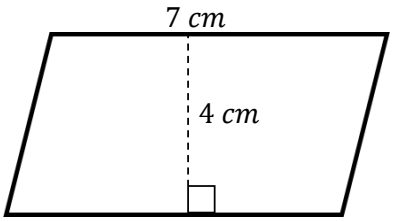
(c) $2(-2x+6)=-3x+9$ (d) $-2(4x+5)=-2(-5x+3)$

8. Find the area of the trapezium and parallelogram.

(a)

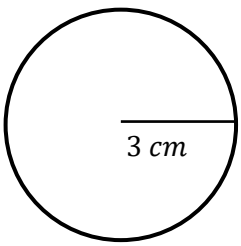


(b)

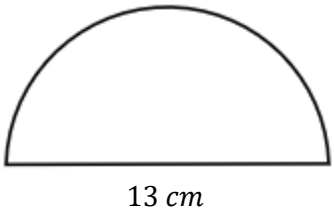


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A44

1. (a) $\frac{317}{44}$ (b) $\frac{53}{36}$

(c) $\frac{555}{44}$ (d) $\frac{155}{66}$

2. (a) $s = 371$ (b) s = -27

3. (a) $-56x + 35$ (b) $-10x + 3$

(c) $-10x + 3$ (d) $-27x^2 - 12x - 12$

4. (a) See quadrilaterals sheet

5. (a) $3:18$ (b) Bill gets \$96 and Ben gets \$80 (c) $63\ ml$ of apple and $14\ ml$ of pineapple

6. (a) 3.35 (b) 3.55

7. (a) $x = 2$ (b) $x = -14$

(c) $x = 3$ (d) $x = -2/9$

8. (a) $Area = 30\ cm^2$ (b) $Area = 28cm^2$

9. (a) $C = 18.84\ cm,$ $A = 28.26\ cm^2$ (b) $P = 33.41\ cm,$ $A = 66.33\ cm^2$

Year 8 Retention Sheet A45

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $2\frac{1}{3}+2\frac{3}{4}=$ (b) $2\frac{1}{8}-1\frac{7}{9}=$

(c) $2\frac{5}{11}\times 3\frac{7}{10}=$ (d) $1\frac{3}{4}\div 2\frac{2}{5}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=3, a=9$ & $t=8$, (b) $u=7.7, a=7.2$ & $t=6$

3. Expand and Simplify:

(a) $9(3x-3)=$ (b) $-2-2(9x+3)=$

(c) $-5(4x-2)-7(3x-6)=$ (d) $-3x(5x-3)-7(x-3)=$

4. Draw a sketch of a **parallelogram** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 54:12 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$175$. They divide the money on the ration $4:3$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $9:2:2$ respectively. If she uses $333\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	4
3	6
4	7
5	5

x	Frequency
1	1
2	4
3	6
4	7
5	2

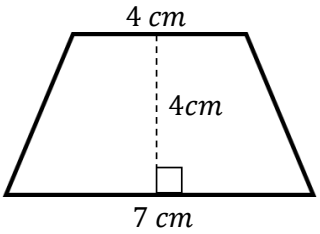
7. Solve:

(a) $3x-8=-2$ (b) $-7x-14=9x+6$

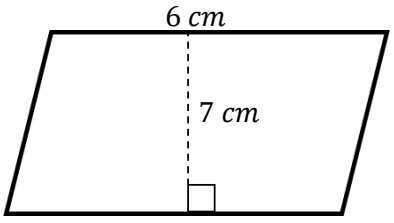
(c) $3(3x+3)=2x-7$ (d) $3(-5x-6)=3(-3x+5)$

8. Find the area of the trapezium and parallelogram.

(a)

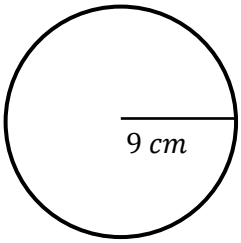


(b)

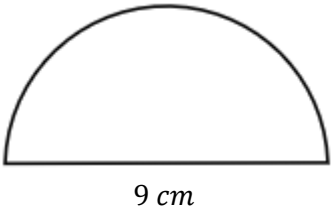


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A45

1. (a) $\frac{61}{12}$ (b) $\frac{25}{72}$

(c) $\frac{999}{110}$ (d) $\frac{35}{48}$

2. (a) $s = 315$ (b) $s = 185$

3. (a) $27x - 27$ (b) $-18x - 8$

(c) $-18x - 8$ (d) $-15x^2 + 2x + 21$

4. (a) See quadrilaterals sheet

5. (a) $54:12$ (b) Bill gets \$100 and Ben gets \$75 (c) $74\ ml$ of apple and $74\ ml$ of pineapple

6. (a) 3.65 (b) 3.25

7. (a) $x = 2$ (b) $x = -5/4$

(c) $x = -16/7$ (d) $x = -11/2$

8. (a) $Area = 22\ cm^2$ (b) $Area = 42cm^2$

9. (a) $C = 56.52\ cm,$ $A = 254.34\ cm^2$ (b) $P = 23.13\ cm,$ $A = 31.79\ cm^2$

Year 8 Retention Sheet A46

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $2\frac{5}{6}+3\frac{5}{11}=$ (b) $1\frac{7}{10}-2\frac{3}{4}=$

(c) $1\frac{7}{8}\times 1\frac{4}{9}=$ (d) $3\frac{1}{2}\div 3\frac{2}{3}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=-4, a=-8 \ \& \ t=8,$ (b) $u=-0.2, a=2.2 \ \& \ t=7$

3. Expand and Simplify:

(a) $3(7x+5)=$ (b) $7-5(9x+5)=$

(c) $-7(2x+1)+7(5x+1)=$ (d) $-4x(x+1)-3(4x-6)=$

4. Draw a sketch of a **kite** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 27:72 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$156$. They divide the money on the ration $9:4$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $5:1:6$ respectively. If she uses $5\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	4
3	6
4	7
5	4

x	Frequency
1	1
2	5
3	6
4	7
5	1

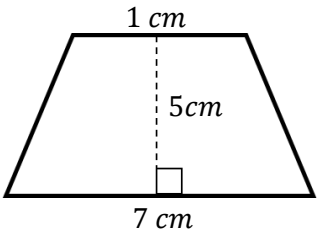
7. Solve:

(a) $9x+1=-53$ (b) $-5x-14=-9x-4$

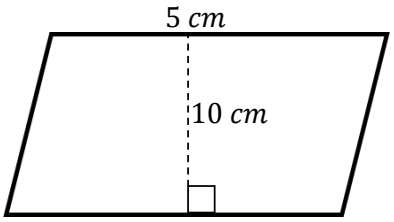
(c) $-2(-x+6)=3x+6$ (d) $-(4x+5)=-3(-2x-9)$

8. Find the area of the trapezium and parallelogram.

(a)

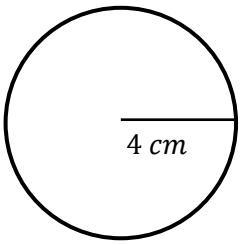


(b)

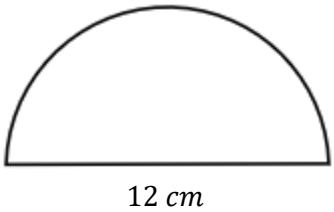


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A46

1. (a) $\frac{415}{66}$ (b) $\frac{-21}{20}$

(c) $\frac{65}{24}$ (d) $\frac{21}{22}$

2. (a) $s = -224$ (b) $s = 54$

3. (a) $21x + 15$ (b) $-45x - 18$

(c) $-45x - 18$ (d) $-4x^2 - 16x + 18$

4. (a) See quadrilaterals sheet

5. (a) $27:72$ (b) Bill gets $\$108$ and Ben gets $\$48$ (c) $1\ ml$ of apple and $6\ ml$ of pineapple

6. (a) 3.55 (b) 3.10

7. (a) $x = -6$ (b) $x = 5/2$

(c) $x = -18$ (d) $x = -16/5$

8. (a) $Area = 20\ cm^2$ (b) $Area = 50cm^2$

9. (a) $C = 25.12\ cm,$ $A = 50.24\ cm^2$ (b) $P = 30.84\ cm,$ $A = 56.52\ cm^2$

Year 8 Retention Sheet A47

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{1}{11}+2\frac{3}{4}=$ (b) $1\frac{1}{5}-3\frac{4}{11}=$

(c) $2\frac{7}{10}\times 1\frac{3}{7}=$ (d) $2\frac{7}{9}\div 3\frac{1}{3}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=$ - 1, $a=$ - 6 & $t=3$, (b) $u=$ 5.5, $a=$ - 4.3 & $t=4$

3. Expand and Simplify:

(a) $-2(4x+2)=$ (b) $-8-6(7x+2)=$

(c) $-8(2x-6)+9(2x-7)=$ (d) $9x(2x-6)+6(3x+4)=$

4. Draw a sketch of a **trapezium** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 12:28 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$160$. They divide the money on the ration $3:7$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $8:8:7$ respectively. If she uses $216\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	4
3	6
4	8
5	2

x	Frequency
1	1
2	3
3	6
4	8
5	2

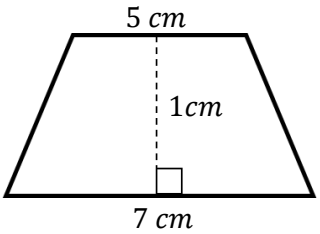
7. Solve:

(a) $5x+3=43$ (b) $3x+8=-3x-12$

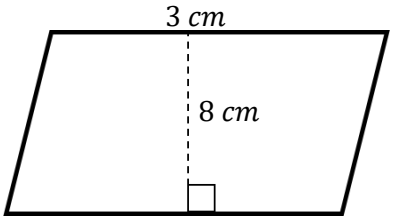
(c) $-3(3x-9)=-5x-7$ (d) $3(-3x-9)=-(-x-5)$

8. Find the area of the trapezium and parallelogram.

(a)

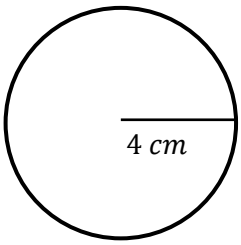


(b)

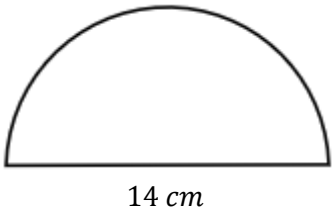


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A47

1. (a) $\frac{169}{44}$ (b) $\frac{-119}{55}$

(c) $\frac{27}{7}$ (d) $\frac{5}{6}$

2. (a) $s = -21$ (b) $s = -58$

3. (a) $-8x - 4$ (b) $-42x - 20$

(c) $-42x - 20$ (d) $18x^2 - 36x + 24$

4. (a) See quadrilaterals sheet

5. (a) $12:28$ (b) Bill gets \$48 and Ben gets \$112 (c) 216 ml of apple and 189 ml of pineapple

6. (a) 3.40 (b) 3.35

7. (a) $x = 8$ (b) $x = -10/3$

(c) $x = 17/2$ (d) $x = -16/5$

8. (a) $Area = 6\ cm^2$ (b) $Area = 24cm^2$

9. (a) $C = 25.12\ cm,$ $A = 50.24\ cm^2$ (b) $P = 35.98\ cm,$ $A = 76.93\ cm^2$

Year 8 Retention Sheet A48

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $3\frac{10}{11}+3\frac{1}{2}=$ (b) $3\frac{4}{9}-2\frac{2}{3}=$

(c) $2\frac{1}{3}\times 2\frac{1}{2}=$ (d) $3\frac{5}{11}\div 2\frac{1}{4}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=$ - $5, a=$ 6 & $t=10,$ (b) $u=$ - $1.0, a=$ 0.7 & $t=4$

3. Expand and Simplify:

(a) $7(2x-8)=$ (b) $8-9(4x+2)=$

(c) $-2(x+1)+7(3x+4)=$ (d) $-5x(5x+5)-2(4x-3)=$

4. Draw a sketch of a **trapezium** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 5:10 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$35$. They divide the money on the ration $4:3$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $4:7:5$ respectively. If she uses $160\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	3
3	5
4	7
5	6

x	Frequency
1	1
2	3
3	5
4	8
5	3

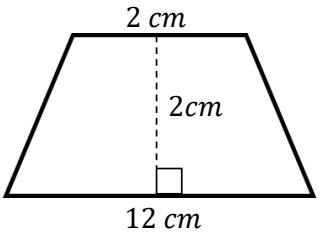
7. Solve:

(a) $6x-4=26$ (b) $7x-19=-x-5$

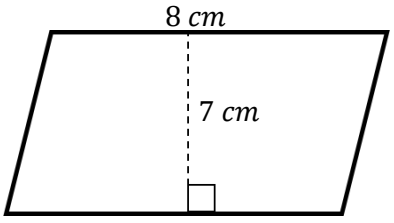
(c) $-4(-3x+4)=5x+2$ (d) $-2(-3x-5)=5(5x-7)$

8. Find the area of the trapezium and parallelogram.

(a)

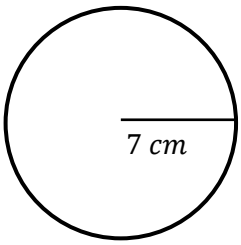


(b)

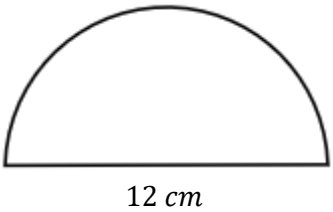


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A48

1. (a) $\frac{163}{22}$ (b) $\frac{7}{9}$

(c) $\frac{35}{6}$ (d) $\frac{152}{99}$

2. (a) $s = 270$ (b) $s = 5$

3. (a) $14x - 56$ (b) $-36x - 10$

(c) $-36x - 10$ (d) $-25x^2 - 33x + 6$

4. (a) See quadrilaterals sheet

5. (a) $5:10$ (b) Bill gets \$20 and Ben gets \$15 (c) 280 ml of apple and 200 ml of pineapple

6. (a) 3.80 (b) 3.45

7. (a) $x = 5$ (b) $x = 7/4$

(c) $x = 18/7$ (d) $x = 45/19$

8. (a) $Area = 14\ cm^2$ (b) $Area = 56cm^2$

9. (a) $C = 43.96\ cm,$ $A = 153.86\ cm^2$ (b) $P = 30.84\ cm,$ $A = 56.52\ cm^2$

Year 8 Retention Sheet A49

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{5}{6}+1\frac{2}{3}=$ (b) $2\frac{4}{5}-1\frac{9}{10}=$

(c) $1\frac{7}{10}\times 3\frac{1}{2}=$ (d) $1\frac{3}{7}\div 2\frac{9}{10}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=$ - $4, a=$ - 6 & $t=2,$ (b) $u=$ - $0.1, a=$ - 4.3 & $t=3$

3. Expand and Simplify:

(a) $-5(5x-6)=$ (b) $4-3(4x+9)=$

(c) $9(5x-1)-2(5x+6)=$ (d) $-9x(2x-7)+2(x-2)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 8:4 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$165$. They divide the money on the ration $6:5$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $3:8:8$ respectively. If she uses $51\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	1
2	5
3	6
4	8
5	0

x	Frequency
1	1
2	3
3	6
4	8
5	2

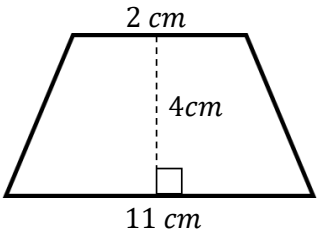
7. Solve:

(a) $-2x+3=5$ (b) $3x+14=-6x-11$

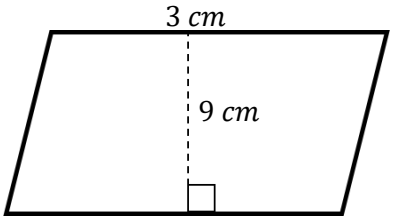
(c) $2(-4x-9)=4x+5$ (d) $3(-4x-9)=-3(5x-9)$

8. Find the area of the trapezium and parallelogram.

(a)

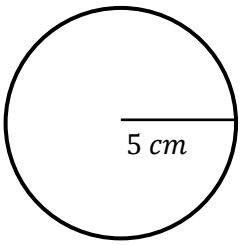


(b)

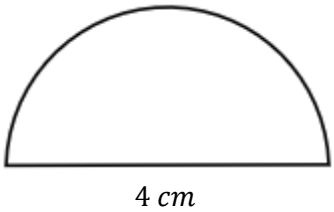


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A49

1. (a) $\frac{7}{2}$ (b) $\frac{9}{10}$

(c) $\frac{119}{20}$ (d) $\frac{100}{203}$

2. (a) $s = 12$ (b) $s = -19$

3. (a) $-25x + 30$ (b) $-12x - 23$

(c) $-12x - 23$ (d) $-18x^2 + 65x - 4$

4. (a) See quadrilaterals sheet

5. (a) $8:4$ (b) Bill gets \$90 and Ben gets \$75 (c) 136 ml of apple and 136 ml of pineapple

6. (a) 3.05 (b) 3.35

7. (a) $x = -1$ (b) $x = -25/9$

(c) $x = -23/12$ (d) $x = 18$

8. (a) $Area = 26\ cm^2$ (b) $Area = 27cm^2$

9. (a) $C = 31.40\ cm,$ $A = 78.50\ cm^2$ (b) $P = 10.28\ cm,$ $A = 6.28\ cm^2$

Year 8 Retention Sheet A50

1. Calculate leaving your answer as an improper fraction in its simplest form.

(a) $1\frac{3}{5}+2\frac{1}{2}=$ (b) $1\frac{2}{5}-1\frac{1}{2}=$

(c) $1\frac{2}{3}\times 3\frac{5}{9}=$ (d) $3\frac{7}{9}\div 2\frac{2}{3}=$

2. Use the formula $s=ut+\frac{1}{2}at^2$ to find s. Round your answer to the nearest whole number.

(a) $u=0, a=0$ & $t=4$, (b) $u=$ - 8.5, $a=$ - 3.5 & $t=9$

3. Expand and Simplify:

(a) $5(1x-3)=$ (b) $5+8(8x+3)=$

(c) $-4(x+1)-5(3x-7)=$ (d) $-9x(4x+1)-9(2x-8)=$

4. Draw a sketch of a **rhombus** and show all its properties using symbols where appropriate.

5. (a) Write the ratio 25:20 in its simplest form.

(b) Bill and Ben are selling their gardening equipment for $\$15$. They divide the money on the ration $2:1$. How much do each of them get?

(c) Gill is making mi$x$ed fruit juice. She makes it by mi$x$ing orange juice, apple juice and pineapple juice in the ratio $5:8:6$ respectively. If she uses $80\ ml$ of orange juice, how much apple and pineapple juice does she need?

6. Calculate the mean in each of the frequency tables below. Give your answer to 3 significant figures:

x	Frequency
1	0
2	4
3	5
4	8
5	2

x	Frequency
1	1
2	3
3	5
4	8
5	3

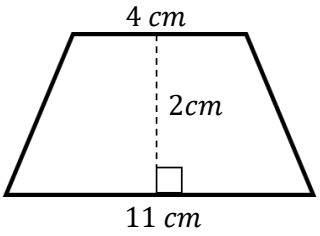
7. Solve:

(a) $-4x-6=-34$ (b) $4x-17=5x-19$

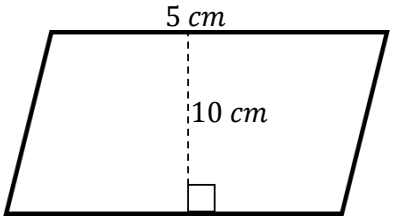
(c) $3(-x+7)=-5x+7$ (d) $3(2x-5)=-(4x-5)$

8. Find the area of the trapezium and parallelogram.

(a)

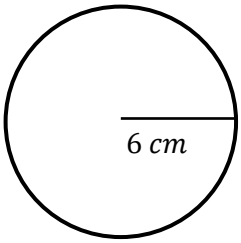


(b)

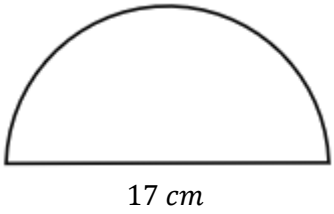


9. Find the perimeter and area of the circle and the semi−circle.
Take $\pi=3.14$ and leave your answer to 2 decimal places.

(a)



(b)



Year 8 Retention Sheet A50

1. (a) $\frac{41}{10}$ (b) $\frac{-1}{10}$

(c) $\frac{160}{27}$ (d) $\frac{17}{12}$

2. (a) $s = 0$ (b) $s = -112$

3. (a) $5x - 15$ (b) $64x + 29$

(c) $64x + 29$ (d) $-36x^2 - 27x + 72$

4. (a) See quadrilaterals sheet

5. (a) $25:20$ (b) Bill gets \$10 and Ben gets \$5 (c) $128\ ml$ of apple and $96\ ml$ of pineapple

6. (a) 3.40 (b) 3.45

7. (a) $x = 7$ (b) $x = 2$

(c) $x = -7$ (d) $x = 2$

8. (a) $Area = 15\ cm^2$ (b) $Area = 50cm^2$

9. (a) $C = 37.68\ cm,$ $A = 113.04\ cm^2$ (b) $P = 43.69\ cm,$ $A = 113.43\ cm^2$