

Contents of Sample Version: Problem Solving Solved

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4 Equations

Sample Resource ©Toticity Limited

Complete list of units in the full resource:

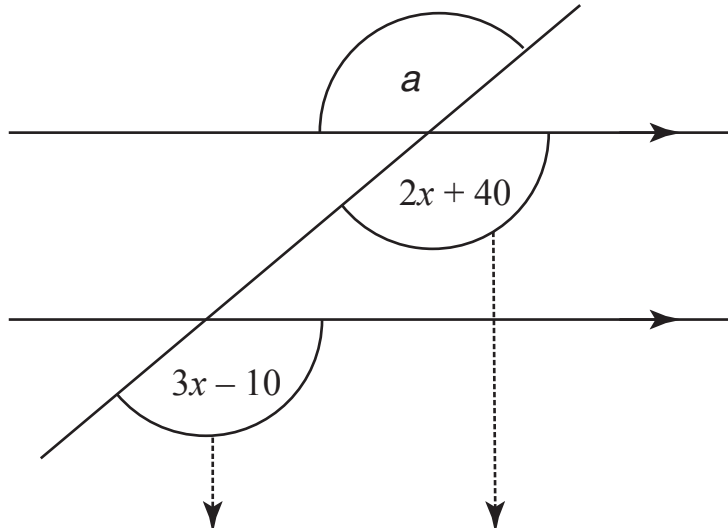
4.1	Equations and perimeter of a rectangle introduction	
4.2	Equations and perimeter of a rectangle next steps	
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4.4	Equations and perimeter of a square introduction	
4.5	Equations and perimeter of a square next steps	
4.6	Equations and perimeter of a square advanced	
4.7	Equations and angles in a triangle introduction	
4.8	Equations and angles in a triangle next steps	
4.9	Equations and angles in a triangle advanced	
4.10	Equations and angles introduction	Sample Unit
4.11	Equations and angles next steps	
4.12	Equations and angles advanced	

4.10 Equations and angles introduction 1



Sample Resource ©Toticity Limited

1 Three straight lines are shown.



1 a Solve the equation

$$\boxed{} = \boxed{}$$

Equation

Answer

1 b Vertically opposite angles are equal.
Calculate the size of angle a

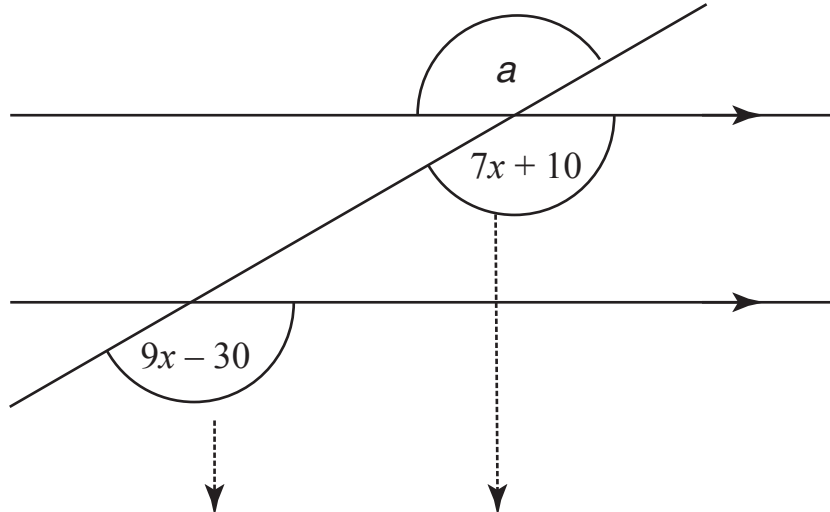
$$2 \times \boxed{} + 40 = \boxed{}^\circ$$

4.10 Equations and angles introduction 2



Sample Resource ©Toticity Limited

1 Three straight lines are shown.



1 a Solve the equation

$$\boxed{} = \boxed{}$$

Equation

Answer _____

1 b Vertically opposite angles are equal.
Calculate the size of angle a

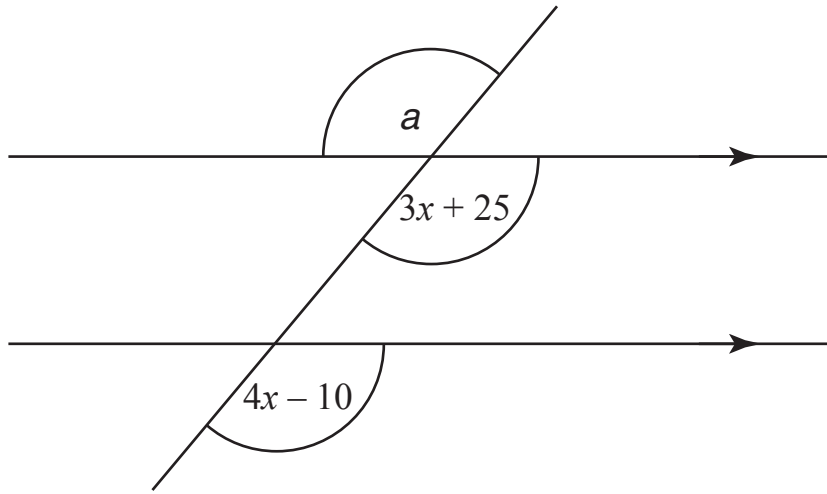
$$7 \times \boxed{} + 10 = \boxed{}^\circ$$

4.10 Equations and angles introduction: Test



Sample Resource ©Toticity Limited

1 Three straight lines are shown.



Calculate the size of angle a

Answer _____

4.10 Equations and angles introduction: Answers



Sample Resource ©Toticity Limited

4.10 Equations and angles introduction 1

1a $3x - 10 = 2x + 40$

$$3x - 2x = 40 + 10$$

$$x = 50$$

1b angle $a = 2 \times 50 + 40 = 140^\circ$

4.10 Equations and angles introduction 2

1a $9x - 30 = 7x + 10$

$$9x - 7x = 10 + 30$$

$$2x = 40 \div 2$$

$$x = 20$$

1b angle $a = 7 \times 20 + 10 = 150^\circ$

4.10 Equations and angles introduction: Test

1 $4x - 10 = 3x + 25$

$$4x - 3x = 25 + 10$$

$$x = 35$$

angle $a = 3 \times 35 + 25 = 130^\circ$

8. Volume And Filling

Sample Resource ©Toticity Limited

Complete list of units in the full resource:

8.1	Volume And Filling	
8.2	Volume And Transferring Introduction	Sample Unit
8.3	Volume And Transferring Next Steps	
8.4	Volume And Filling Advanced	
8.5	Volume And Rate Of Filling Introduction	
8.6	Volume And Rate Of Filling Next Steps	Sample Unit
8.7	Volume And Rate Of Filling Advanced	Sample Unit
8.8	Volume And Filling Cylinders Introduction	
8.9	Volume And Filling Cylinders Advanced	
8.10	Volume And Filling Cylinders Extension	

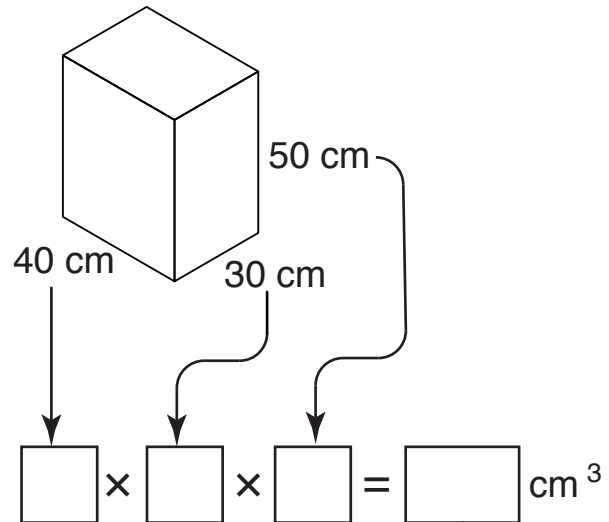
8.2 Volume and transferring introduction 1



Sample Resource ©Toticity Limited

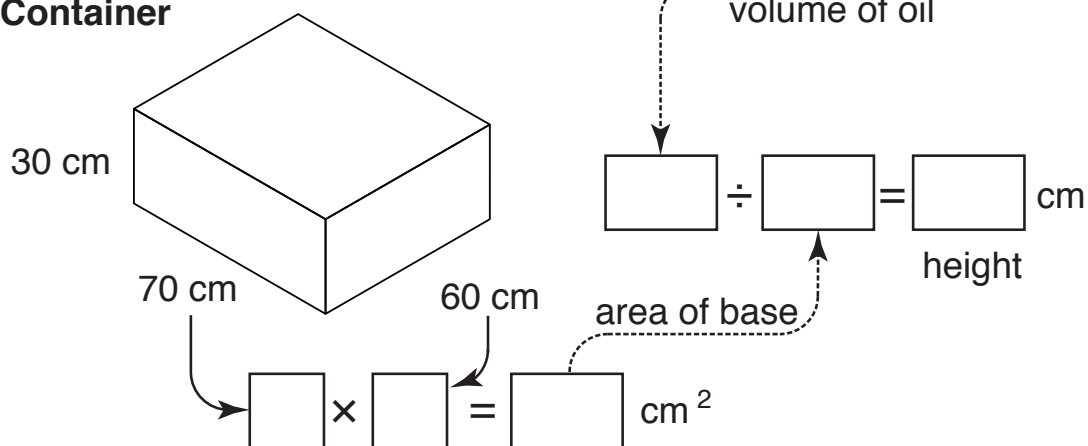
- 1a** The diagram shows a **tank** in the shape of a **cuboid**.
The tank is full of oil.
Calculate the **volume** of the tank.

Tank



- 1b** The diagram shows an **empty** container in the shape of a **cuboid**.
The oil from the tank is put into the container.
Work out the **height** of the oil in the container.

Container

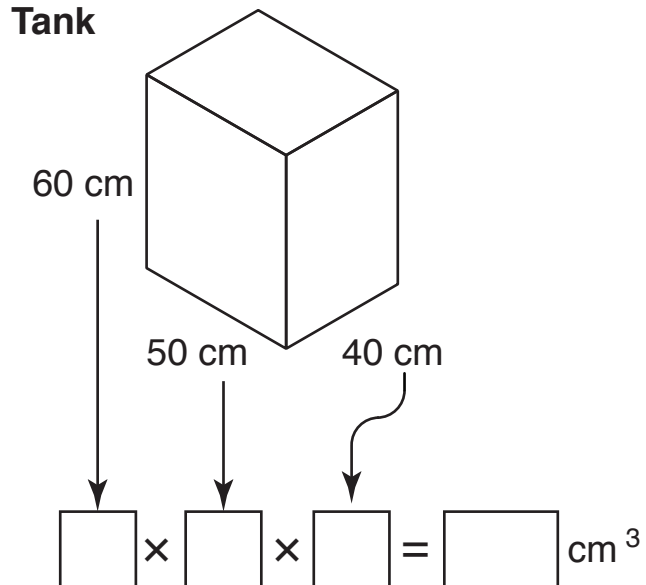


8.2 Volume and transferring introduction 2

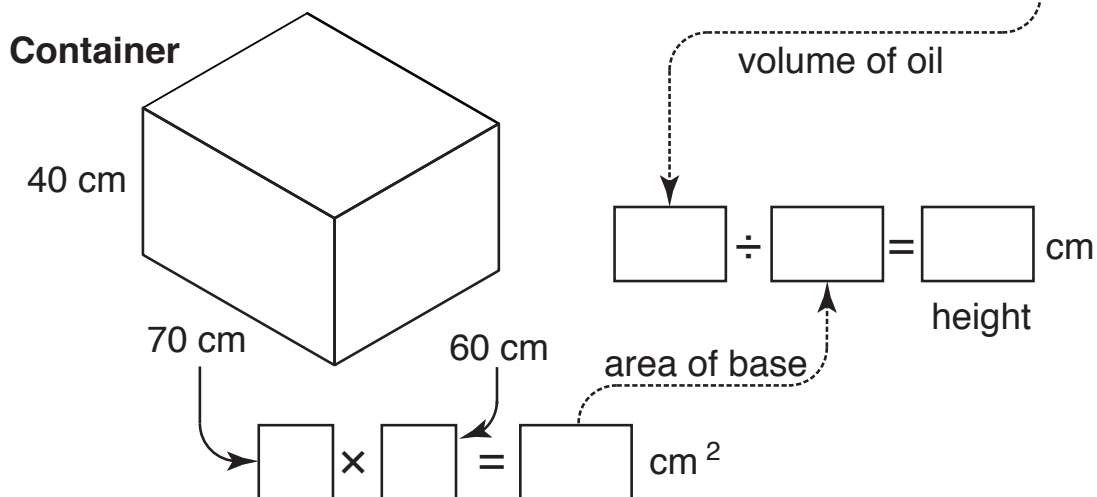


Sample Resource ©Toticity Limited

- 1a** The diagram shows a **tank** in the shape of a **cuboid**.
The tank is full of oil.
Calculate the **volume** of the tank.



- 1b** The diagram shows a container in the shape of a **cuboid**.
The container is empty.
The oil from the tank is put into the container.
Work out the **height** of the oil in the container.



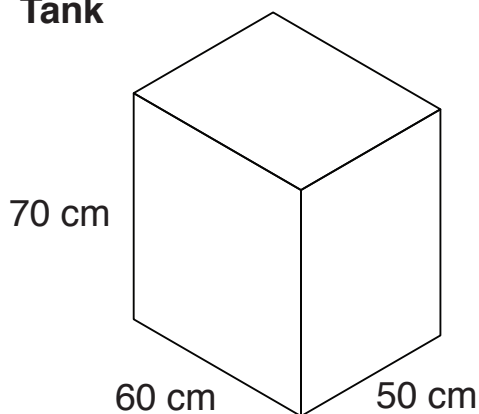
8.2 Volume and transferring introduction: test



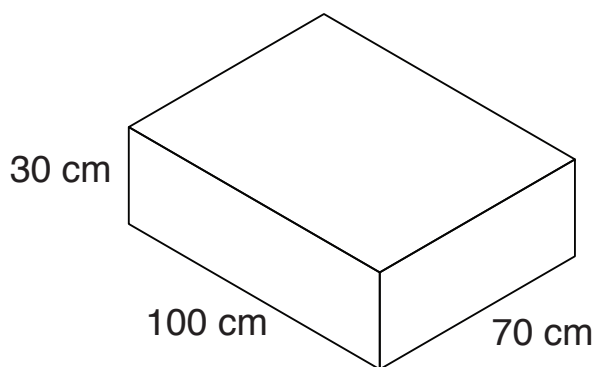
Sample Resource ©Toticity Limited

- 1 The diagram shows a tank in the shape of a cuboid.
It also shows a container in the shape of a cuboid.

Tank



Container



The tank is full of oil.
The container is empty.

The oil from the tank is put into the container.

Work out the height of the oil in the container.
Give your answer to one decimal place.

Answer _____

8.2 Volume and transferring introduction: answers

Sample Resource ©Toticity Limited

8.2 Volume and transferring introduction 1

- 1a** $40 \text{ cm} \times 30 \text{ cm} \times 50 \text{ cm} = 60\,000 \text{ cm}^3$
1b Area of the base: $70 \times 60 = 4200 \text{ cm}^2$
Height : $60\,000 \div 4200 = 14.3 \text{ cm}$

8.2 Volume and transferring introduction 2

- 1a** $60 \text{ cm} \times 50 \text{ cm} \times 40 \text{ cm} = 120\,000 \text{ cm}^3$
1b Area of the base: $70 \times 60 = 4200 \text{ cm}^2$
Height: $120\,000 \div 4200 = 28.6 \text{ cm}$

8.2 Volume and transferring introduction: Test

- 1** Volume of the tank:
 $70 \text{ cm} \times 60 \text{ cm} \times 50 \text{ cm} = 210\,000 \text{ cm}^3$

Area of the base of the container:
 $100 \times 70 = 7\,000 \text{ cm}^2$

Height of the oil in the container:
 $210\,000 \div 7\,000 \text{ cm} = 30 \text{ cm}$

8.6 Volume and rate of filling next steps 1

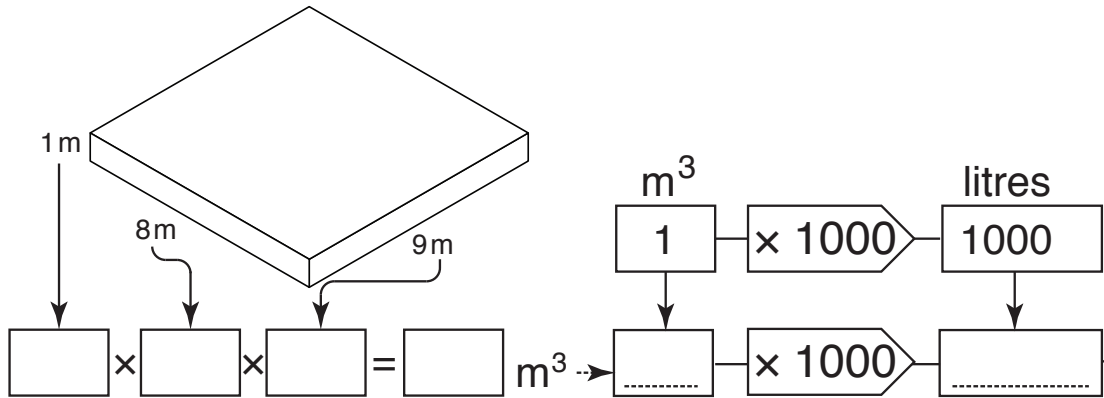


Sample Resource ©Toticity Limited

1a The diagram shows a swimming pool.
The swimming pool is in the shape of a cuboid.

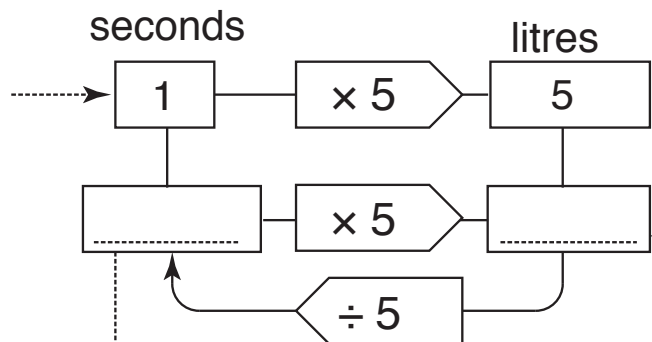
$1 \text{ m}^3 = 1000 \text{ litres}$.

Calculate the capacity of the swimming pool.



1b The swimming pool is filled with water at a rate of 5 litres per second.

Work out how many seconds it takes to fill the pool.



1c Work out how many minutes it takes to fill the pool.

$\div 60 =$ minutes

1d Work out how many hours it takes to fill the pool.

$\div 60 =$ hours

8.6 Volume and rate of filling next steps 2

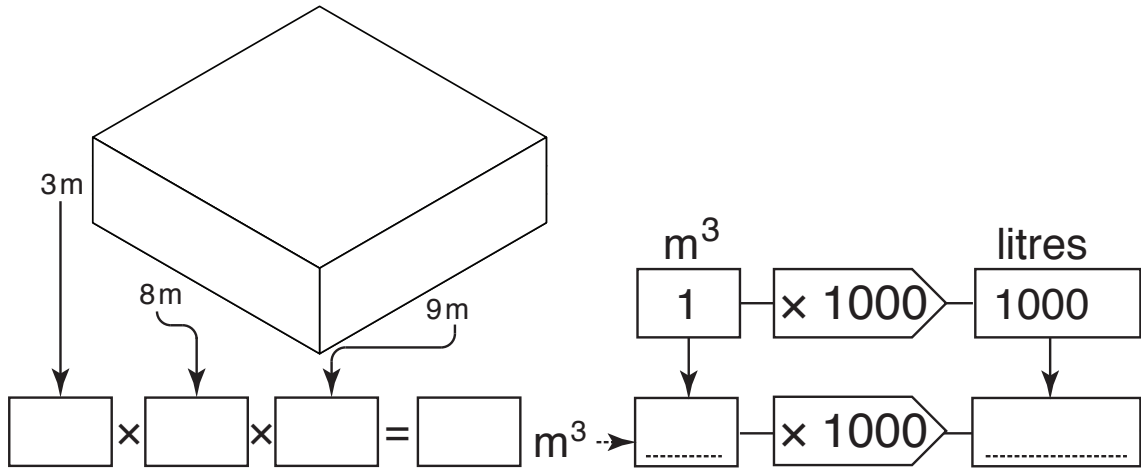


Sample Resource ©Tocity Limited

1a The diagram shows a swimming pool.
The swimming pool is in the shape of a cuboid.

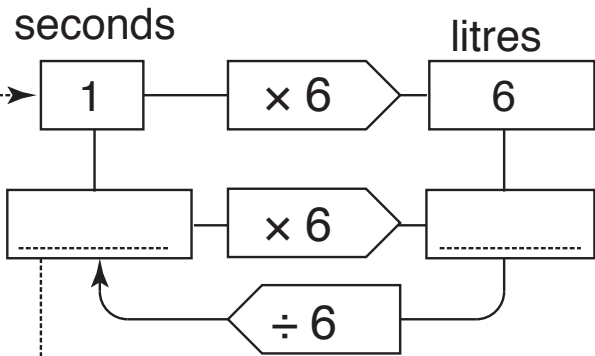
1 m³ = 1000 litres.

Calculate the capacity of the swimming pool.



1b The swimming pool is filled with water at a rate of 6 litres per second.

Work out how many seconds it takes to fill the pool.



1c Work out how many minutes it takes to fill the pool.

÷ 60 = minutes

1d Work out how many hours it takes to fill the pool.

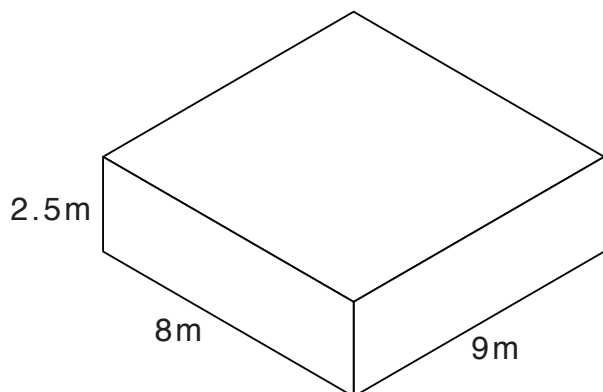
÷ 60 = hours

8.6 Volume and rate of filling next steps: Test



Sample Resource ©Toticity Limited

1



Filled at
10 litres per second

The diagram shows a swimming pool.
The swimming pool is in the shape of a cuboid.
The swimming pool is filled with water at the rate of 10 litres per second.

Jane has 6 hours to fill the swimming pool.

$1 \text{ m}^3 = 1000 \text{ litres}$.

Will Jane completely fill the swimming pool in under 6 hours?
You must show all your working.

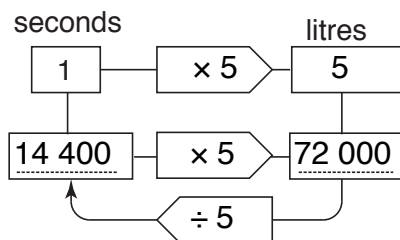
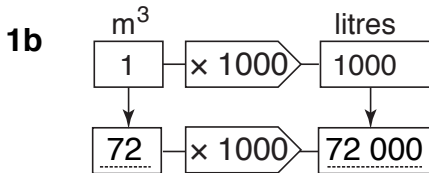
Answer _____

8.6 Volume and rate of filling next steps: Answers

Sample Resource ©Toticity Limited

8.6 Volume and rate of filling next steps 1

1a $1 \times 8 \times 9 = 72 \text{ m}^3$

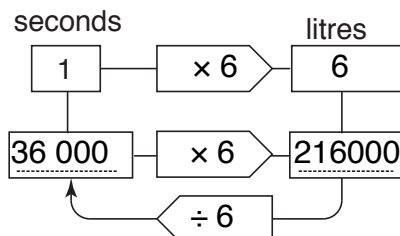
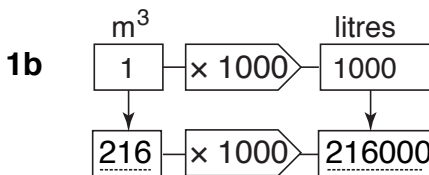


1c $14\,400 \div 60 = 240$ minutes

1d $240 \text{ minutes} \div 60 = 4$ hours

8.6 Volume and rate of filling next steps 2

1a $3 \times 8 \times 9 = 216 \text{ m}^3$

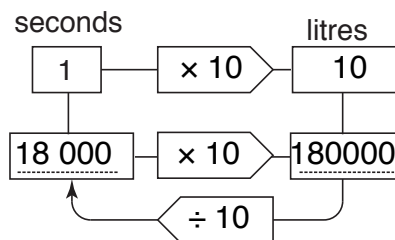
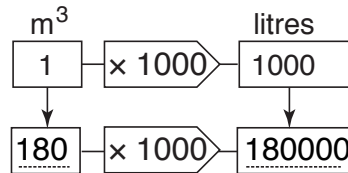


1c $36\,000 \div 60 = 600$ minutes

1d $600 \text{ minutes} \div 60 = 10$ hours

8.6 Volume and rate of filling next steps: Test

1 $2.5 \times 8 \times 9 = 180 \text{ m}^3$



$18\,000 \div 60 = 300$ minutes

$300 \text{ minutes} \div 60 = 5$ hours

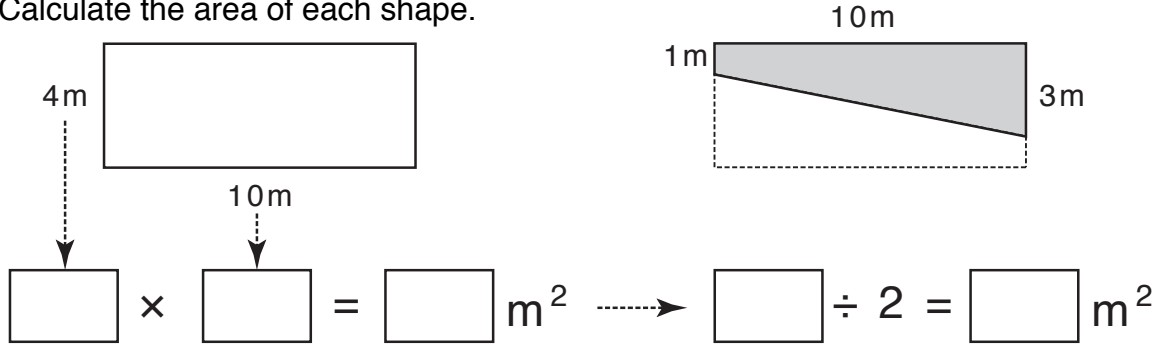
Jane **will** completely fill the swimming pool in under 6 hours

8.7 Volume and rate of filling advanced 1



Sample Resource ©Toticity Limited

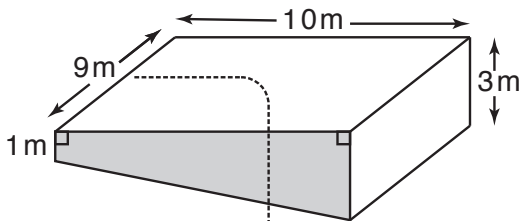
1a The diagram shows a rectangle and a trapezium.
Calculate the area of each shape.



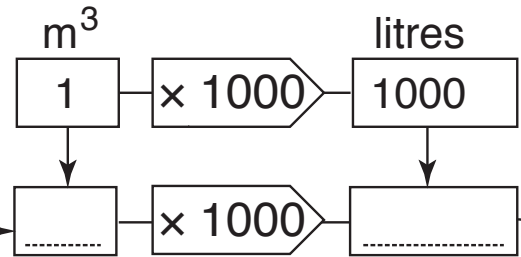
1b The diagram shows a swimming pool.
The swimming pool is in the shape of a prism.
The cross-section is a trapezium.

1 m³ = 1000 litres.

Calculate the capacity of the swimming pool.

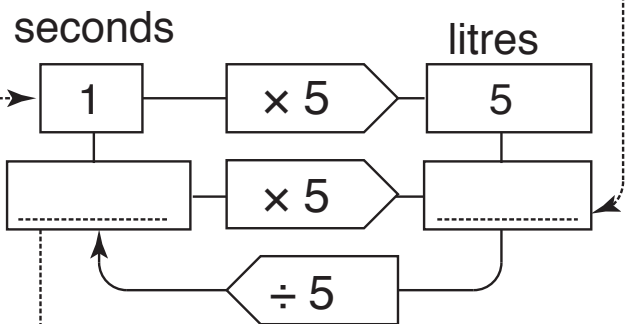


$\square \times \square = \square \text{ m}^3$
 area of trapezium



1c The swimming pool is filled with water at a rate of 5 litres per second.

Work out how many seconds it takes to fill the pool.



1d Work out how many minutes it takes to fill the pool.

$\square \div 60 = \square \text{ minutes}$

1e Work out how many hours it takes to fill the pool.

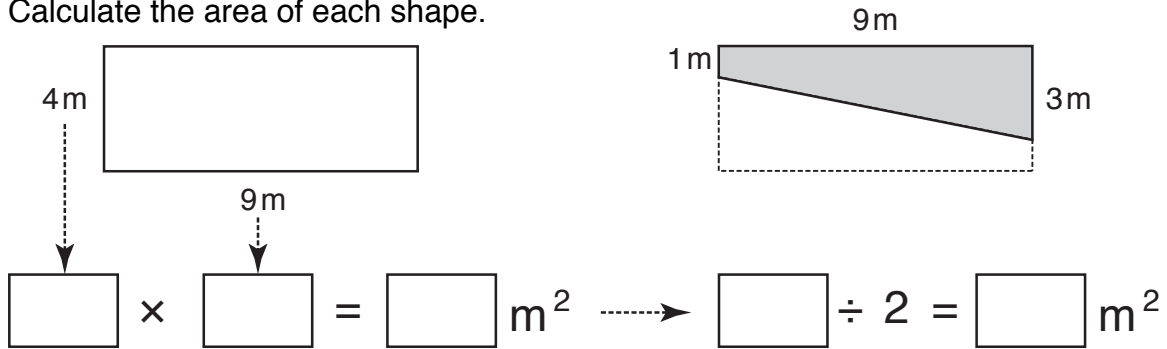
$\square \div 60 = \square \text{ hours}$

8.7 Volume and rate of filling advanced 2



Sample Resource ©Tocity Limited

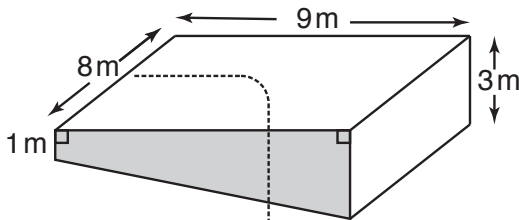
- 1a** The diagram shows a rectangle and a trapezium.
Calculate the area of each shape.



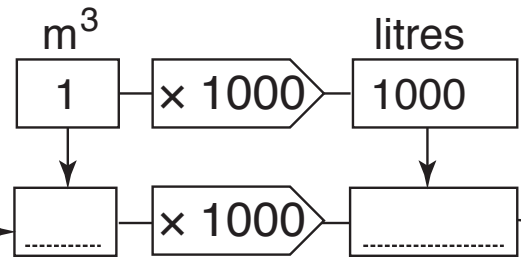
- 1b** The diagram shows a swimming pool.
The swimming pool is in the shape of a prism.
The cross-section is a trapezium.

$1 \text{ m}^3 = 1000 \text{ litres}$.

Calculate the capacity of the swimming pool.

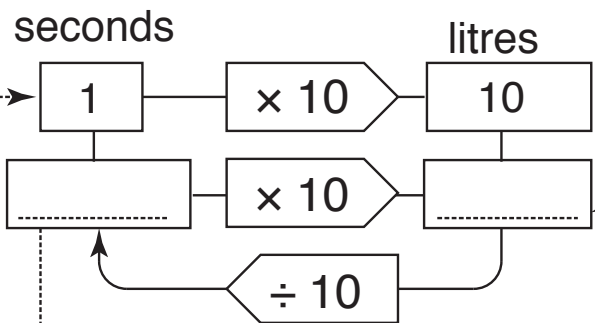


$\square \times \square = \square \text{ m}^3$
 area of
 trapezium



- 1c** The swimming pool is filled with water at a rate of 10 litres per second.

Work out how many seconds it takes to fill the pool.



- 1d** Work out how many minutes it takes to fill the pool.

$\square \div 60 = \square \text{ minutes}$

- 1e** Work out how many hours it takes to fill the pool.

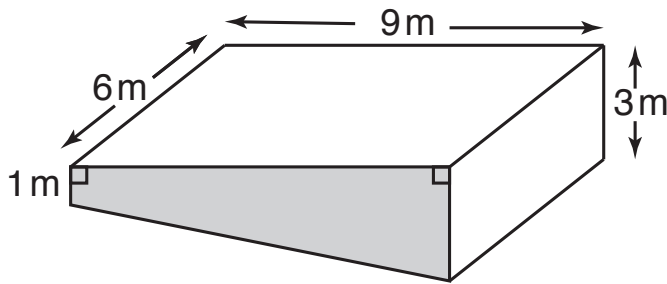
$\square \div 60 = \square \text{ hours}$

8.7 Volume and rate of filling advanced: Test



Sample Resource ©Tocity Limited

1



Filled at
2 litres per second

The diagram shows a swimming pool.
The swimming pool is in the shape of a prism.
The cross-section is a trapezium.
The swimming pool is filled with water at the rate of 2 litres per second.

Sophie has 16 hours to fill the swimming pool.

$1 \text{ m}^3 = 1000 \text{ litres}$.

Will Sophie completely fill the swimming pool in under 16 hours?
You must show all your working.

Answer _____

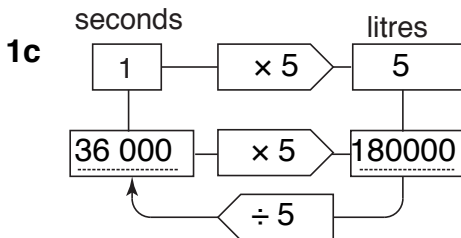
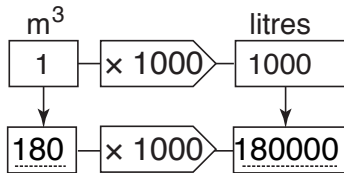
8.7 Volume and rate of filling advanced: Answers

Sample Resource ©Toticity Limited

8.7 Volume and rate of filling advanced 1

1a $4 \times 10 = 40 \text{ m}^2$ $40 \text{ m}^2 \div 2 = 20 \text{ m}^2$

1b $20 \times 9 = 180 \text{ m}^3$



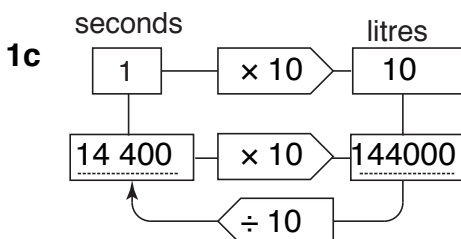
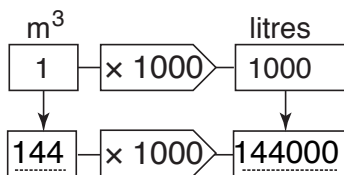
1d $36\ 000 \div 60 = 600$ minutes

1e 600 minutes $\div 60 = 10$ hours

8.7 Volume and rate of filling advanced 2

1a $4 \times 9 = 36 \text{ m}^2$ $36 \text{ m}^2 \div 2 = 18 \text{ m}^2$

1b $18 \times 8 = 144 \text{ m}^3$



1d $14\ 400 \div 60 = 240$ minutes

1e 240 minutes $\div 60 = 4$ hours

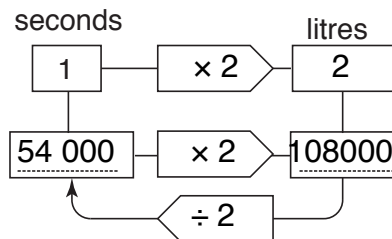
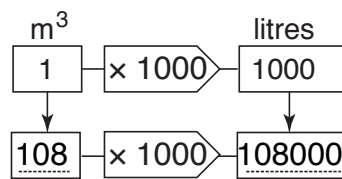
8.7 Volume and rate of filling advanced : Test

1 Area of the trapezium:

$$\frac{(1+3)}{2} \times 9 = 18 \text{ cm}^2$$

Capacity of the swimming pool:

$$18 \times 6 = 108 \text{ m}^3$$



$54\ 000 \div 60 = 900$ minutes

900 minutes $\div 60 = 15$ hours

Sophie will completely fill the swimming pool in under 16 hours.

5. Perimeter

Sample Resource ©Toticity Limited

Complete list of units in the full resource:

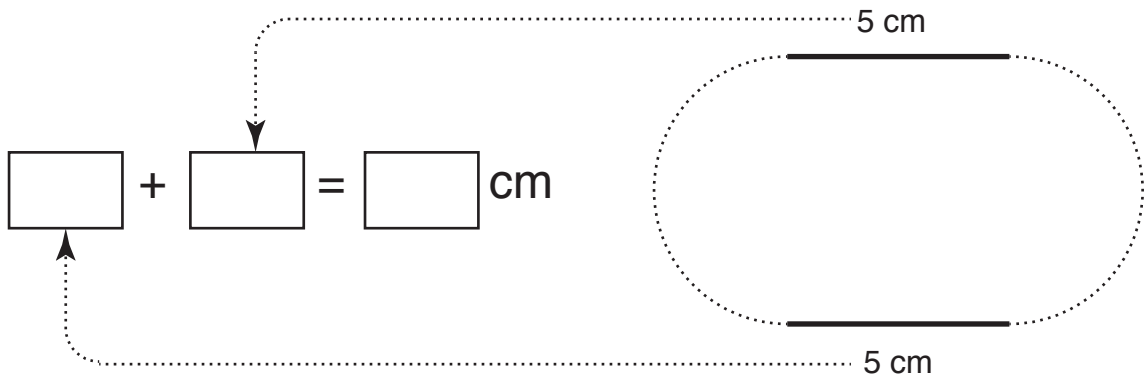
5.1	Perimeter Of Compound Shapes Introduction	
5.2	Perimeter Of Compound Shapes Next Steps	Sample Unit
5.3	Perimeter Of Compound Shapes Advanced	Sample Unit
5.4	Perimeter With A Semicircle Introduction	
5.5	Perimeter With A Semicircle Advanced	
5.6	Perimeter With Arcs Introduction	
5.7	Perimeter With Arcs Next Steps	
5.8	Perimeter With Arcs Advanced	
5.9	Perimeter With Arcs Extension	

5.2 Perimeter of Compound Shapes Next Steps 1

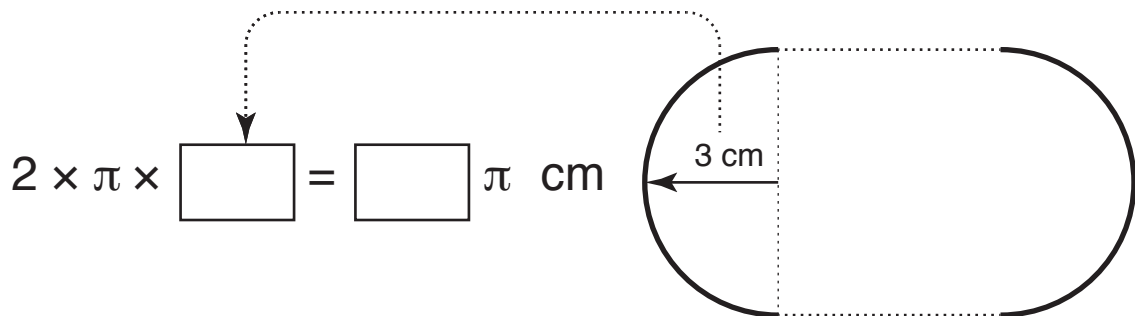


Sample Resource ©Toticity Limited

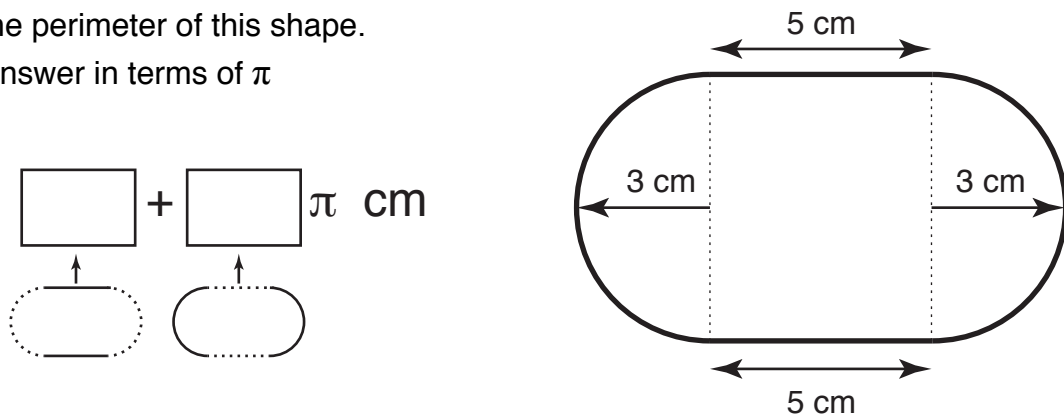
- 1a** The shape has two straight sides each of length 5 cm.
Write down the total length of the straight sides.



- 1b** Each end of the shape is a semicircle of radius 3 cm.
Calculate the circumference of the circle.
Give your answer in terms of π



- 1c** Calculate the perimeter of this shape.
Give your answer in terms of π

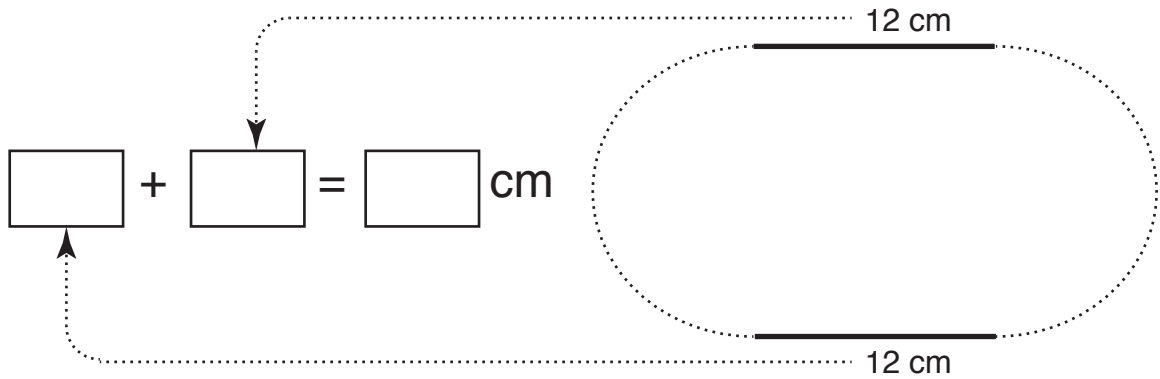


5.2 Perimeter of Compound Shapes Next Steps 2

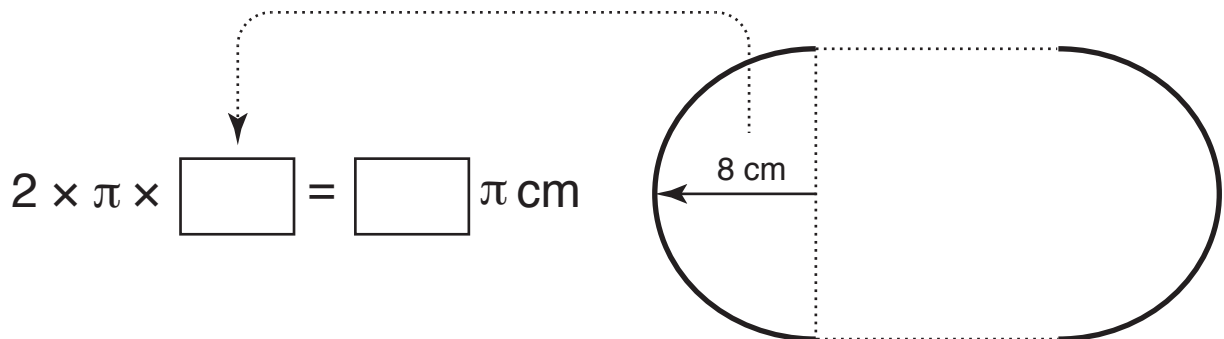


Sample Resource ©Toticity Limited

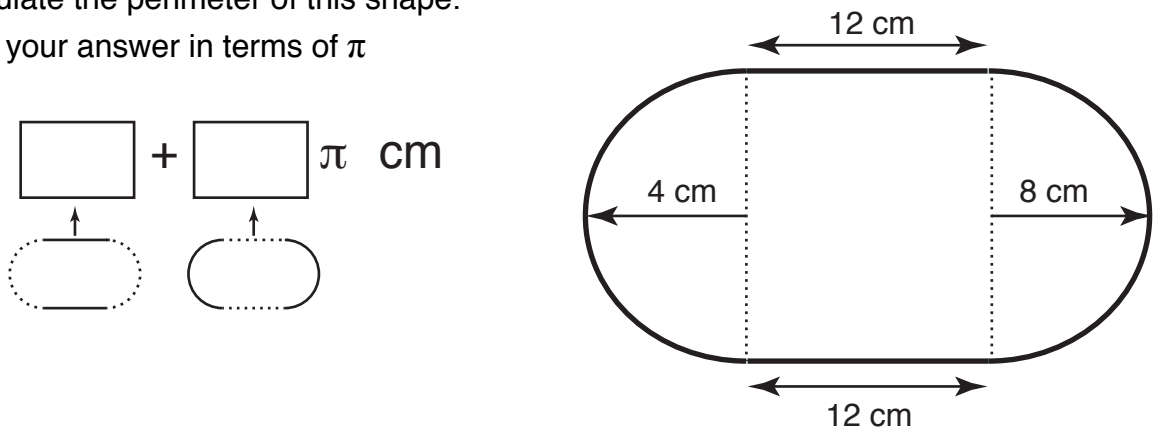
- 1a** The shape has two straight sides each of length 12 cm.
Write down the total length of the straight sides.



- 1b** Each end of the shape is a semicircle of radius 8 cm.
Calculate the circumference of the circle.
Give your answer in terms of π



- 1c** Calculate the perimeter of this shape.
Give your answer in terms of π

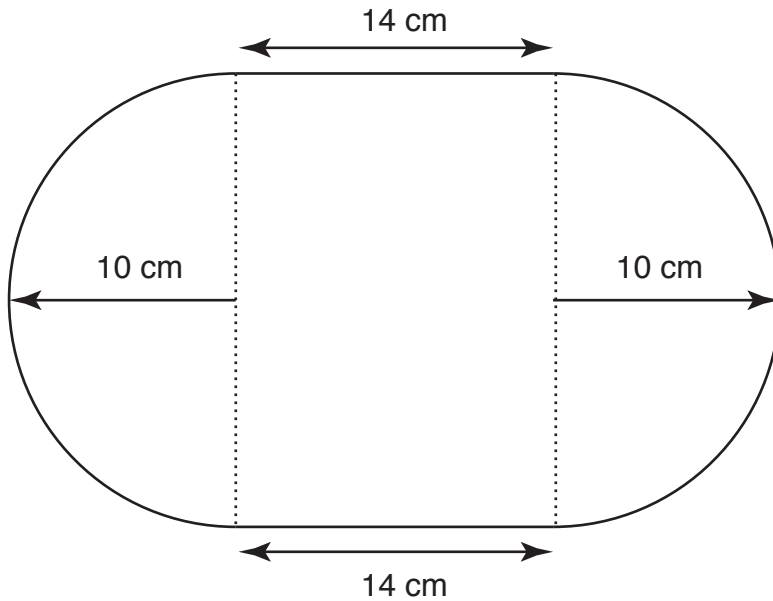


5.2 Perimeter of Compound Shapes Next Steps: Test



Sample Resource ©Toticity Limited

1



The diagram shows two straight sides each of length 14 cm
Each end of the shape is a semicircle of radius 10 cm.

Calculate the perimeter of the shape.

Give your answer in terms of π

Answer _____

5.2 Perimeter of Compound Shapes Next Steps: Answers



Sample Resource ©Toticity Limited

5.2 Perimeter of Compound Shapes Next Steps 1

1a $5 + 5 = 10$ cm

1b $2 \times \pi \times 3 = 6\pi$ cm

1c $10 + 6\pi$ cm

5.2 Perimeter of Compound Shapes Next Steps 2

1a $12 + 12 = 24$ cm

1b $2 \times \pi \times 8 = 16\pi$ cm

1c $24 + 16\pi$ cm

5.2 Perimeter of Compound Shapes Next Steps: Test

1 **straight sides:** $14 + 14 = 28$ cm

circumference of the circle:

$2 \times \pi \times 10 = 20\pi$ cm

perimeter of the shape:

$28 + 20\pi$ cm

5.3 Perimeter of Compound Shapes Advanced 1



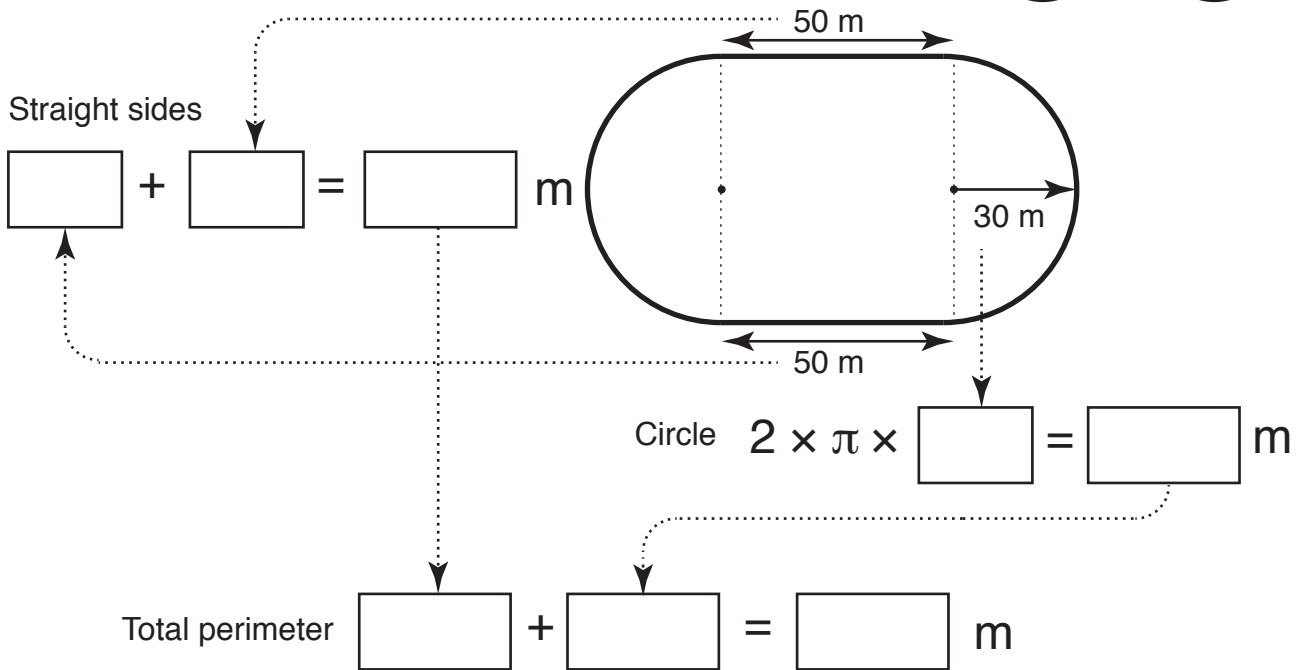
Sample Resource ©Toticity Limited

1a The diagram shows a cycle track.

The track has two straight sides each of length 50 m.

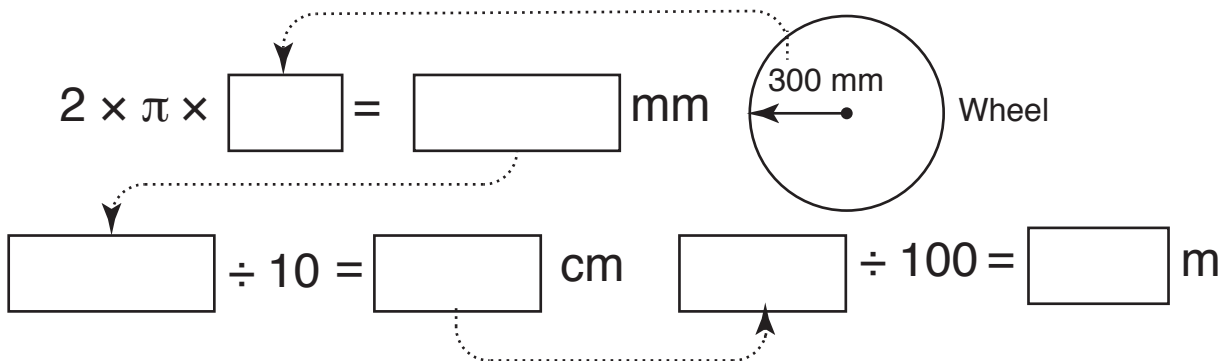
Each end of the track is a semicircle of radius 30 m.

Calculate the perimeter of the track.



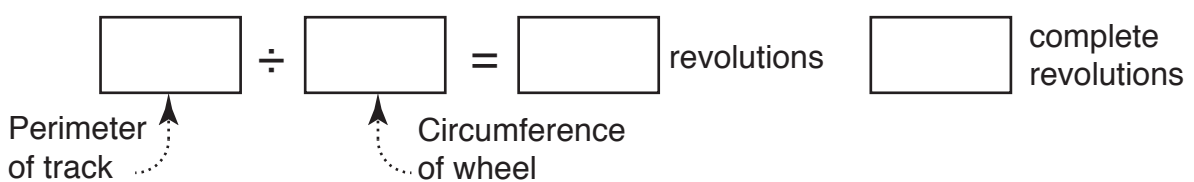
1b The radius of each wheel of Paul's bike is 300 mm.

Calculate the circumference of the wheel in metres.



1c Paul is going to ride his bike around the track once.

Calculate how many complete revolutions each wheel of his bike will make.



5.3 Perimeter of Compound Shapes Advanced 2



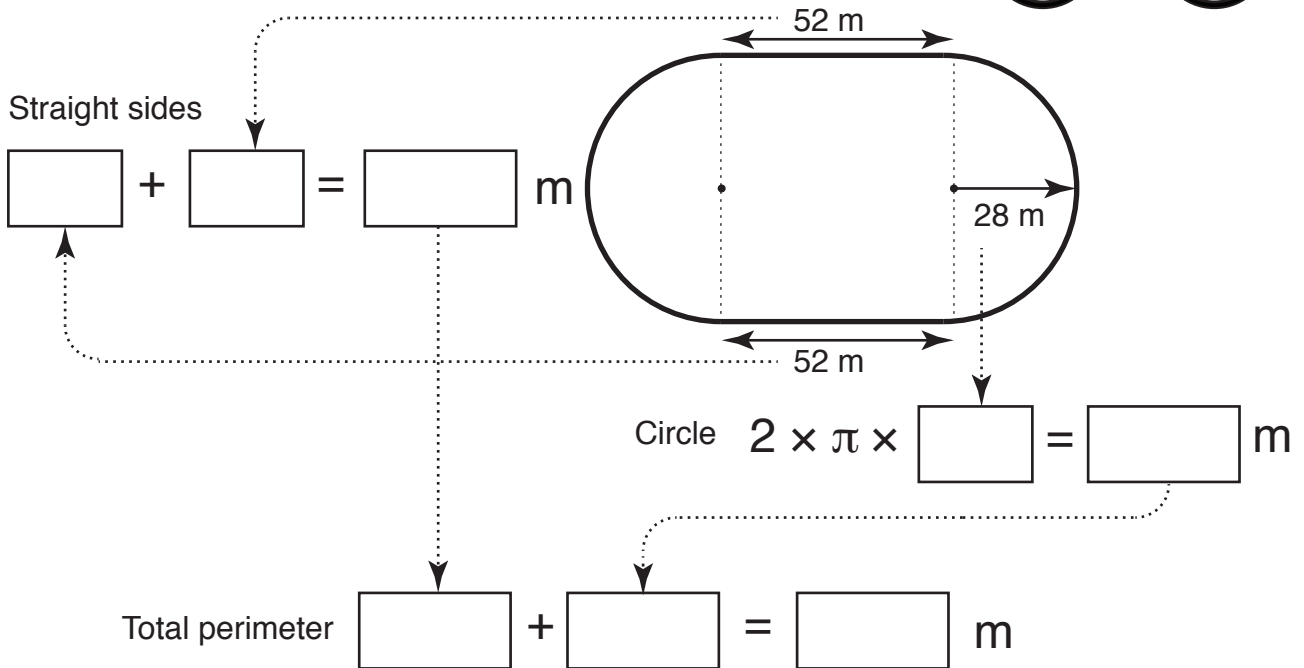
Sample Resource ©Toticity Limited

1a The diagram shows a cycle track.

The track has two straight sides each of length 52 m.

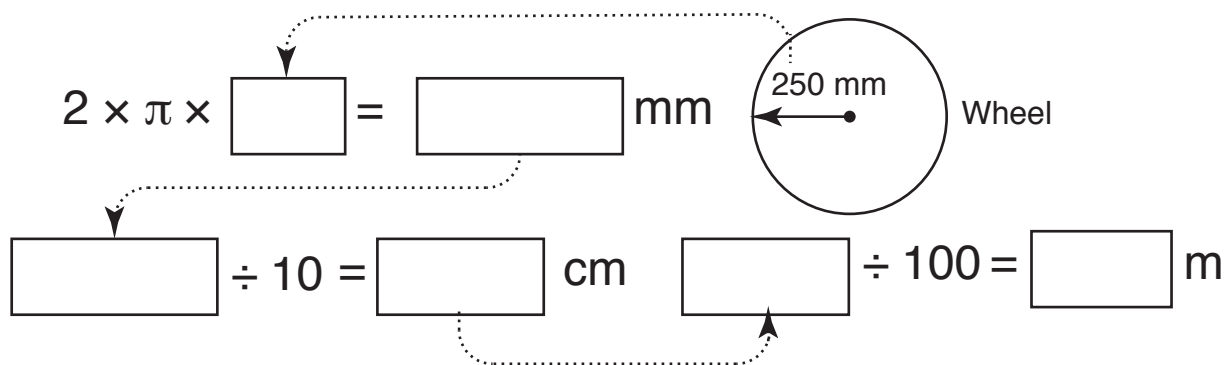
Each end of the track is a semicircle of radius 28 m.

Calculate the perimeter of the track.



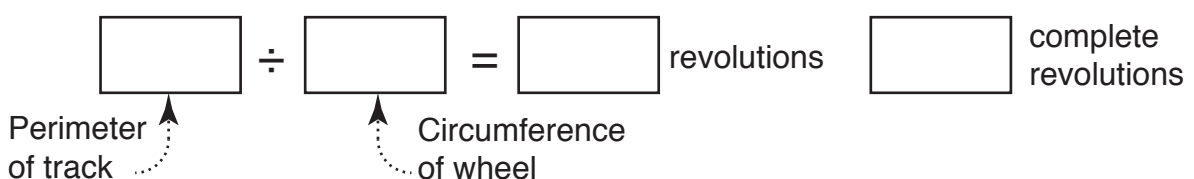
1b The radius of each wheel of Paul's bike is 250 mm.

Calculate the circumference of the wheel in metres.



1c Paul is going to ride his bike around the track once.

Calculate how many complete revolutions each wheel of his bike will make.

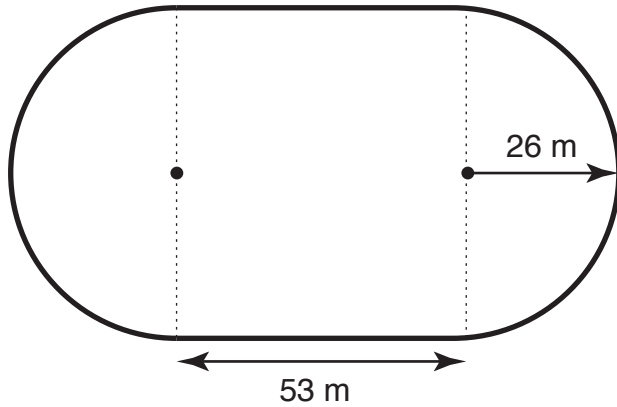


5.3 Perimeter of Compound Shapes Advanced: Test



Sample Resource ©Toticity Limited

1 The diagram shows a cycle track.



The track has two straight sides each of length 53 m.
Each end of the track is a semicircle of radius 26 m.

The radius of each wheel of Mary's bike is 270 mm.
Mary is going to ride her bike around the track once.

Calculate how many complete revolutions each wheel of her bike will make.

Answer _____

5.3 Perimeter of Compound Shapes Advanced: Answers



Sample Resource ©Toticity Limited

5.3 Perimeter of Compound Shapes Advanced 1

1a straight sides: $50 + 50 = 100$ m
circle: $2 \times \pi \times 30 = 188.4$ m
total perimeter: $100 + 188.4 = 288.4$ m

1b $2 \times \pi \times 300 = 1884$ mm
 $1884 \text{ mm} \div 10 = 188.4$ cm
 $188.4 \text{ cm} \div 100 = 1.9$ m

1c $288.4 \div 1.9 = 151.8$
151 complete revolutions

5.3 Perimeter of Compound Shapes Advanced 2

1a straight sides: $52 + 52 = 104$ m
circle: $2 \times \pi \times 28 = 175.8$ m
total perimeter: $104 + 175.8 = 279.8$ m

1b $2 \times \pi \times 250 = 1570$ mm
 $1570 \text{ mm} \div 10 = 157$ cm
 $157 \text{ cm} \div 100 = 1.6$ m

1c $279.8 \div 1.6 = 174.9$
174 complete revolutions

5.3 Perimeter of Compound Shapes Advanced: Test

1 **straight sides:** $53 + 53 = 106$ m
circle: $2 \times \pi \times 26 = 163.3$ m
total perimeter: $106 + 163.3 = 269.3$ m

Diameter of the wheel:

$2 \times \pi \times 270 = 1695.6$ mm
 $1695.6 \text{ mm} \div 10 = 169.6$ cm
 $169.6 \text{ cm} \div 100 = 1.7$ m

$269.3 \div 1.7 = 158.4$

158 complete revolutions

9. Money

Sample Resource ©Toticity Limited

Complete list of units in the full resource:

9.1	Money And Buying Things Introduction	
9.2	Money And Buying Things Next Steps	Sample Unit
9.3	Money And Buying Things Advanced	Sample Unit
9.4	Money And Buying Things Extension	
9.5	Money And Sharing	
9.6	Money And Bills Introduction	
9.7	Money And Bills Next Steps	
9.8	Money and Bills Advanced	

9.2 Money and buying things next steps 1

Sample Resource ©Toticity Limited

1 Here are the charges at a café.

		
Tea £1.80	Coffee £2.15	Sandwich £3.15

1a Alan buys 3 teas.
Work out the cost.

Tea £1.80 →

1	8	0
×		3

p

1b Alan buys 2 coffees.
Work out the cost.

Coffee £2.15 →

2	1	5
×		2

p

1c Alan buys 5 sandwiches.
Work out the cost.

Sandwich £3.15 →

3	1	5
×		5

p

1d Work out the total cost.

+			

p

1e Alan shares the cost equally between 5 people.
How much does each person pay?

5			
£		.	

9.2 Money and buying things next steps 2

Sample Resource ©Toticity Limited

1 Here are the charges at a café.


 Tea £1.80	 Coffee £2.15	 Cake £2.35
---	--	--

1a Joe buys 2 teas.
Work out the cost.

Tea £1.80 →

1	8	0
×		2

p




1b Joe buys 3 coffees.
Work out the cost.

Coffee £2.15 →

2	1	5
×		3

p




1c Joe buys 5 cakes.
Work out the cost.

Cake £2.35 →

2	3	5
×		5

p



1d Work out the total cost.

+			

p

1e Joe shares the cost equally between 5 people.
How much does each person pay?

5			

£

--	--	--	--

9.2 Money and buying things next steps: Test



Sample Resource ©Toticity Limited

1 Here are the charges at a café.

		
Tea £1.90	Coffee £2.05	Cake £2.45

Emily buys

3 teas at	£1.90 each
2 coffees at	£2.05 each
5 cakes at	£2.45 each

Emily shares the cost equally between 5 people.
How much does each person pay?

Answer £ _____

9.2 Money and buying things next steps: Answers



Sample Resource ©Toticity Limited

9.2 Money and buying things next steps 1

1a $180 \times 3 = 540$ p

1b $215 \times 2 = 430$ p

1c $315 \times 5 = 1575$ p

1d $540 + 430 + 1575 = 2545$ p

1e $2545 \div 5 = 509$ so £5.09 each

9.2 Money and buying things next steps 2

1a $180 \times 2 = 360$ p

1b $215 \times 3 = 645$ p

1c $235 \times 5 = 1175$ p

1d $360 + 645 + 1175 = 2180$ p

1e $2180 \div 5 = 436$ so £4.36 each

9.2 Money and buying things next steps: Test

1 $190 \times 3 = 570$ p

$205 \times 2 = 410$ p

$245 \times 5 = 1225$ p

$570 + 410 + 1225 = 2205$

$2205 \div 5 = 441$ so £4.41 each

9.3 Money and buying things advanced 1

Sample Resource ©Toticity Limited

1a Meg buys some shopping.

She pays with a £5 note.
She gets 40p change.

Work out the total cost of Meg's shopping.

$$\begin{array}{r}
 5 \quad 0 \quad 0 \\
 - \quad \quad 4 \quad 0 \\
 \hline
 \quad \quad \quad
 \end{array}$$

1b Meg buys
one magazine costing £2.40
and one bottle of orange costing 90p
Work out the total cost.



£2.40



90p

$$\begin{array}{r}
 2 \quad 4 \quad 0 \\
 + \quad \quad 9 \quad 0 \\
 \hline
 \quad \quad \quad
 \end{array}$$

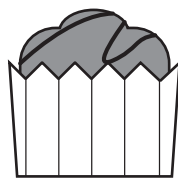
1c Meg also buys a cake.
Work out the cost of the cake.



£2.40



90p



$$\begin{array}{r}
 \quad \quad \quad \\
 - \quad \quad \quad \\
 \hline
 \quad \quad \quad \\
 \text{£} \quad \cdot \quad \quad
 \end{array}$$

9.3 Money and buying things advanced 2

Sample Resource ©Toticity Limited

1a Jill buys some shopping.

She pays with a £5 note.

She gets 60p change.

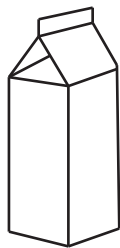
Work out the total cost of Jill's shopping.

$$\begin{array}{r}
 500 \\
 - \quad 60 \\
 \hline
 \end{array}$$

1b Jill buys
 one magazine costing £2.40
 and one carton of milk costing £1.10
 Work out the total cost.



£2.40



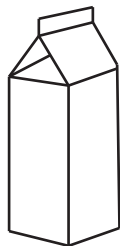
£1.10

$$\begin{array}{r}
 240 \\
 + 110 \\
 \hline
 \end{array}$$

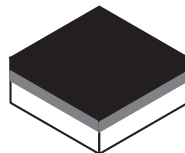
1c Jill also buys a cake.
 Work out the cost of the cake.



£2.40



£1.10



$$\begin{array}{r}
 \\
 - \\
 \hline
 \\

 \end{array}$$

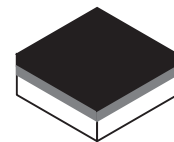
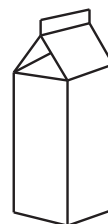
9.3 Money and buying things advanced: Test



Sample Resource ©Toticity Limited

1 Emily buys

- one magazine costing £2.50
- one carton of milk costing £1.20
- one cake



£2.50

£1.20

She pays with a £5 note.
She gets 40p change.

Work out the cost of one cake.

Answer £ _____

9.3 Money and buying things advanced: Answers



Sample Resource ©Toticity Limited

9.3 Money and buying things advanced 1

1a $500 - 40 = 460$

1b $240 + 90 = 330\text{p}$

1c $460 - 330 = 130\text{p}$

9.3 Money and buying things advanced 2

1a $500 - 60 = 440$

1b $240 + 110 = 350\text{p}$

1c $440 - 350 = 90\text{p}$

9.3 Money and buying things advanced: Test

1 $500 - 40 = 460$

$250 + 120 = 370\text{p}$

$460 - 370 = 90\text{p}$

16 Fractions

Sample Resource ©Toticity Limited

Complete list of units in the full resource:

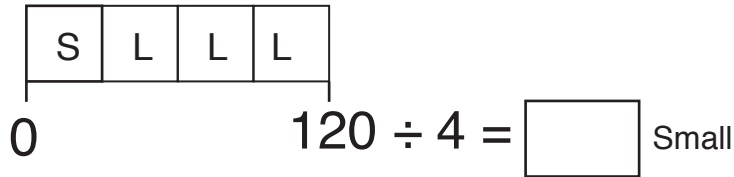
16.1	Fraction of an amount introduction	
16.2	Fraction of an amount next steps	
16.3	Fraction of an amount advanced	
16.4	Fractions, percentages, profit	Sample Unit
16.5	Fractions & profit introduction	
16.6	Fractions & profit next steps	
16.7	Fractions & profit advanced	
16.8	Fractions & ratio	
16.9	Fractions of a shape introduction	
16.10	Fractions of a shape advanced	

16.4 Fractions , percentages, profit 1



Sample Resource ©Toticity Limited

- 1a** Amy sold 120 hot chocolates.
 One quarter of the hot chocolates were small.
 The rest were large.
 Calculate how many hot chocolates were small.



- 1b** Calculate how many hot chocolates were large. $120 - \boxed{} = \boxed{} \text{ Large}$

- 1c** On each small hot chocolate, Amy makes a profit of £2
 Work out her total profit on small hot chocolates.

$$\boxed{} \times \text{£}2 = \text{£} \boxed{} \text{ Profit (Small Hot Chocolates)}$$

Small

- 1d** Amy makes 10% more profit for each large hot chocolate.
 Work out her profit on a large hot chocolate.

$$\text{£}2 \times 1.10 = \text{£} \boxed{}$$

- 1e** Work out her total profit on large hot chocolates.

$$\boxed{} \times \boxed{} = \text{£} \boxed{} \text{ Profit (Large Hot Chocolates)}$$

Large

- 1f** Work out the total profit that Amy makes.

Answer _____

16.4 Fractions , percentages, profit 2



Sample Resource ©Toticity Limited

1a Amy sold 150 cappuccinos.

One third of the cappuccinos were small.

The rest were large.

Calculate how many cappuccinos were small.



S	L	L
---	---	---

$$0 \qquad \qquad \qquad 150 \div 3 = \boxed{} \text{ Small}$$

1b Calculate how many

cappuccinos were large.

$$150 - \boxed{} = \boxed{} \text{ Large}$$

1c On each small cappuccino, Amy makes a profit of £2.50

Work out her total profit on small cappuccinos.

$$\boxed{} \times \text{£}2.50 = \text{£} \boxed{} \text{ Profit (Small Cappuccinos)}$$

Small

1d Amy makes 20% more profit for a each large cappuccino.

Work out her profit on a large cappuccino.

$$\text{£}2.50 \times 1.20 = \text{£} \boxed{}$$

1e Work out her total profit on large cappuccino.

$$\boxed{} \times \boxed{} = \text{£} \boxed{} \text{ Profit (Large Cappuccions)}$$

Large

1f Work out the total profit that Amy makes.

Answer _____

16.4 Fractions , percentages, profit: Answers



Sample Resource ©Toticity Limited

16.4 Fractions , percentages, profit 1

- 1a $120 \div 4 = 30$ small hot chocolates
- 1b $120 - 30 = 90$ large hot chocolates
- 1c $30 \times \pounds 2 = \pounds 60$ profit (small)
- 1d $\pounds 2 \times \pounds 1.10 = \pounds 2.20$ extra profit (large)
- 1e $\pounds 2.20 \times 90 = \pounds 198$ total profit (large)
- 1f $\pounds 60 + \pounds 198 = \pounds 258$ total profit

16.4 Fractions , percentages, profit 2

- 1a $150 \div 3 = 50$ small cappuccinos
- 1b $150 - 50 = 100$ large cappuccinos
- 1c $50 \times \pounds 2.50 = \pounds 125$ profit (small)
- 1d $\pounds 2.50 \times \pounds 1.20 = \pounds 3$ extra profit (large)
- 1e $\pounds 3 \times 100 = \pounds 300$ total profit (large)
- 1f $\pounds 300 + \pounds 125 = \pounds 425$ total profit

16.4 Fractions , percentages, profit: Test

- 1 $80 \div 4 = 20$ small caffè lattes
 $80 - 20 = 60$ large caffè lattes

profit (small):
 $20 \times \pounds 1.50 = \pounds 30$

profit (large)
 $\pounds 1.50 \times 1.30 = \pounds 1.95$ extra profit
 $\pounds 1.95 \times 60 = \pounds 117$ total profit from large

Total Profit:
 $\pounds 30 + \pounds 117 = \pounds 147$ total profit