Big Maths Beat That!: Teacher Notes

SAFE Challenge 18			
	Step Location in the SAFE framework		Title of Step
	Progress Drive	Step No.	
Q1	Amounts: Amounts of Distance	27	I can convert km and m in both directions and to 3dp
	Amounts: Amounts of Mass	17	I can convert kg and g in both directions and to 3dp
	Amounts: Amounts of Space	23	I can convert ml and L in both directions and to 3dp
Q2	Amounts: Amounts of Space	22	I can calculate area using CLIC
Q3	Amounts: Amounts of Time	31	I can convert times and then calculate time gaps
Q4	Amounts: Amounts of Turn	25	I can use a protractor to measure a specified acute angle to the nearest 3°
		27	I can use a protractor to measure a specified obtuse angle to the nearest 3°
		29	I can use a protractor to measure a specified reflex angle to the nearest 3°
Q5	Fractions: Fractions: It's Nothing New	8	I can use Smile Multiplication for fractions
Q6	Fractions: Fractions: Calculation	16	I can multiply mixed numbers by whole numbers
Q7	Fractions: Fractions: Percentages	2	I can see that percentages are proportions
Q8	Fractions: Fractions: Percentages	3	I know all of my percentage Learn Its
Q9	Dangerous Maths: Pattern Spotting	17	I can spot patterns where the gap is a fraction
Q10	Dangerous Maths: Algebra	12	I can solve equations with brackets

NAME: CLASS: DATE:

SAFE 18 | WK: 1 | /10

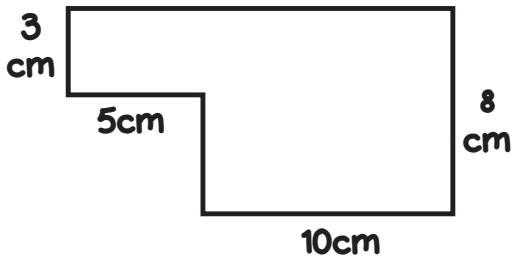
1

3.456 km = _____ m

2.41 L = _____ ml

408 g = _____ kg

2 What is the perimeter and area of the shape shown below?



Perimeter =

Area =

3

10:45pm

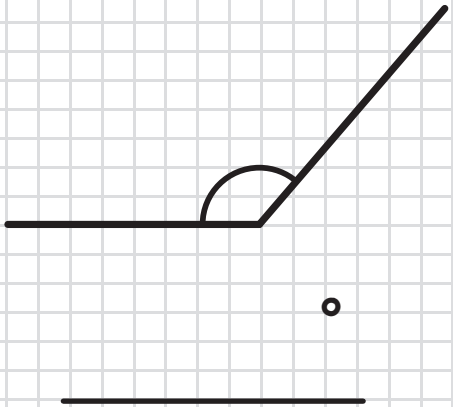
12 hour clock

What time was it 3 hours and 18 minutes earlier?

:

24 hour clock

4 Measure the size of the angle



_____

5 $7 \times \frac{4}{5} =$

6 $4 \times 3\frac{4}{5} =$

7 20% of 150 =

8 Write as proper fractions

1% = _____

10% = _____

20% = _____

9 $13\frac{1}{2}$, $14\frac{1}{4}$, 15, $15\frac{3}{4}$, ...

next in the sequence is _____

10 (3 x 5) - (4 - 1) =

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

Andrell Education Ltd

NAME: CLASS: DATE:

SAFE 18 | WK: 2 | /10

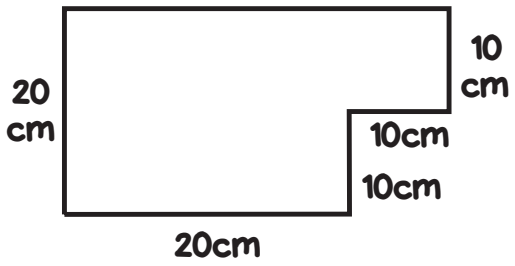
1

2340m = _____ km

1.113 L = _____ ml

5421 g = _____ kg

2 What is the perimeter and area of the shape shown below?



Perimeter =

Area =

3

08:22AM

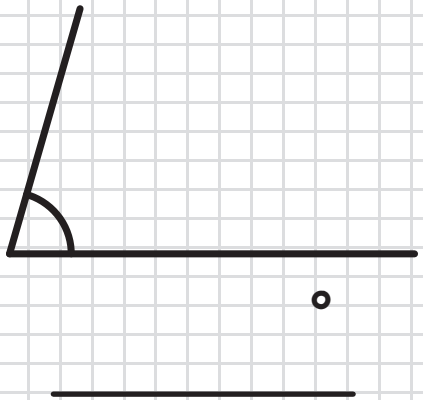
12 hour clock

What time was it 2 hours and 34 minutes later?

:

24 hour clock

4 Measure the size of angle 'a'?



5 $5 \times \frac{3}{8} =$

6 $3 \times 5\frac{2}{3} =$

7 25% of 80 =

8 Write as proper fractions

10% = _____

25% = _____

20% = _____

9 $8\frac{1}{4}$, $8\frac{1}{2}$, $8\frac{3}{4}$, 9, ...

next in the sequence is _____

10 (20 + 9) - (2 x 3) =

MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....

Andrell Education Ltd

NAME: CLASS: DATE:

SAFE 18 | WK: 3 | /10

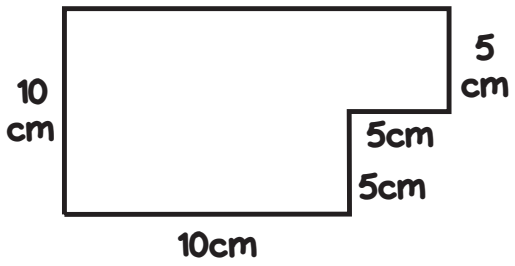
1

2.54km = _____ m

7.45L = _____ ml

8645g = _____ kg

2 What is the perimeter and area of the shape shown below?



Perimeter =

Area =

3

19:32

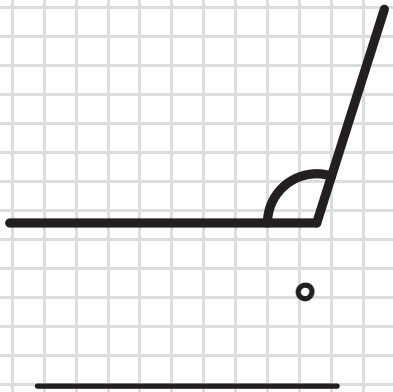
24 hour clock

What time was it 3 hours and 52 minutes earlier?

:

12 hour clock

4 Measure the size of angle 'a'?



_____

5 $9 \times \frac{5}{6} =$

6 $3 \times 5\frac{6}{8} =$

7 20% of 60 =

8 Write as percentages

$\frac{10}{100}$ = _____

$\frac{1}{5}$ = _____

$\frac{1}{4}$ = _____

9 $2\frac{2}{5}$, $2\frac{4}{5}$, $3\frac{1}{5}$, $3\frac{3}{5}$, ...

next in the sequence is _____

10 (3 - 1) x (3 + 2) =

MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....

Andrell Education Ltd

NAME: CLASS: DATE:

SAFE 18 | WK:4 | /10

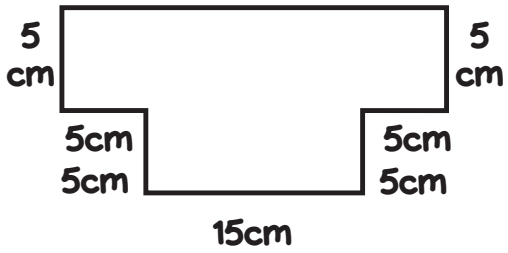
1

5034m = _____ km

3111ml = _____ L

2.34kg = _____ g

2 What is the perimeter and area of the shape shown below?



Perimeter =

Area =

3

15:21

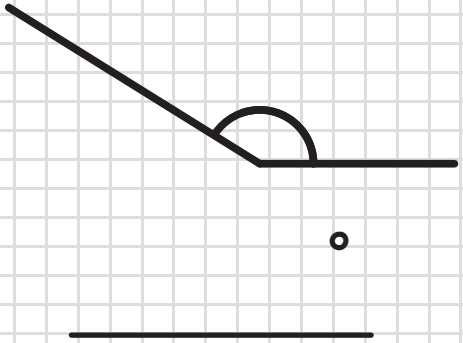
24 hour clock

What time was it 5 hours and 11 minutes earlier?

:

12 hour clock

4 Measure the size of angle 'a'?



_____

5 $4 \times \frac{3}{5} =$

6 $7 \times 3\frac{5}{7} =$

7 50% of 90 =

8 Write as percentages

$\frac{1}{10}$ = _____

$\frac{1}{2}$ = _____

$\frac{3}{4}$ = _____

9 $1\frac{1}{6}$, $1\frac{4}{6}$, $2\frac{1}{6}$, $2\frac{4}{6}$, ...

next in the sequence is _____

10 (11 x 2) - (2 x 6) =

MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....

Andrell Education Ltd

NAME: CLASS: DATE:

SAFE 18 | WK: 5 | /10

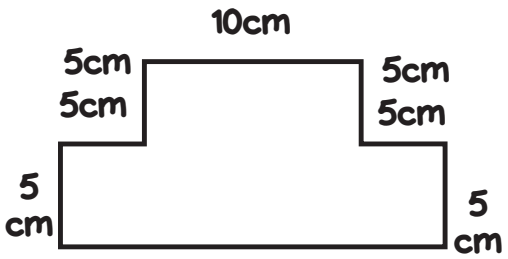
1

2.225km = _____ m

7.32L = _____ ml

3219g = _____ kg

2 What is the perimeter and area of the shape shown below?



Perimeter =

Area =

3

11:05AM

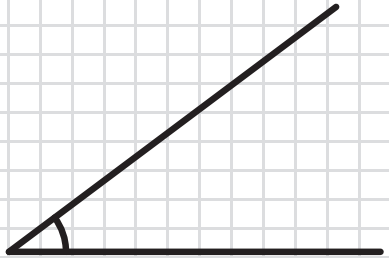
12 hour clock

What time was it 7 hours and 37 minutes earlier?

:

24 hour clock

4 Measure the size of angle 'a'?



_____

5 $3 \times \frac{5}{7} =$

6 $7 \times 5\frac{3}{8} =$

7 25% of 140 =

8 Write as proper fractions

1% = _____

50% = _____

10% = _____

9 $8\frac{2}{7}$, $8\frac{4}{7}$, $8\frac{6}{7}$, $9\frac{1}{7}$, ...

next in the sequence is _____

10 (22 + 9) + (24 ÷ 6) =

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

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NAME: CLASS: DATE:

SAFE 18 | WK: 6 | /10

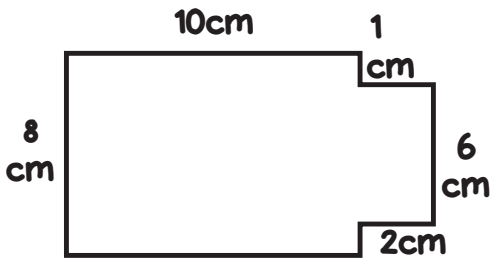
1

9.2km = _____ m

3.415L = _____ ml

7.62kg = _____ g

2 What is the perimeter and area of the shape shown below?



Perimeter =

Area =

3

11:32pm

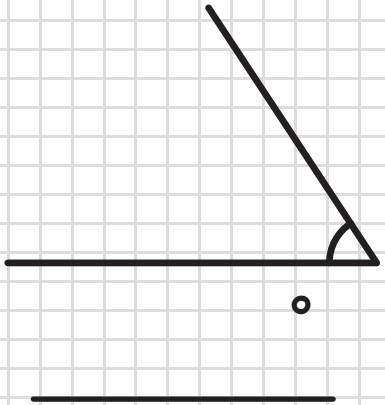
12 hour clock

What time was it 2 hours and 12 minutes earlier?

:

24 hour clock

4 Measure the size of angle 'a'?



5 $6 \times \frac{6}{8} =$

6 $8 \times 2\frac{4}{5} =$

7 50% of 180 =

8 Write as proper fractions

10% = _____

25% = _____

75% = _____

9 $1\frac{1}{8}$, $1\frac{5}{8}$, $2\frac{1}{8}$, $2\frac{5}{8}$, ...

next in the sequence is _____

10 (16 ÷ 4) x (2 x 2) =

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

Andrell Education Ltd

NAME: CLASS: DATE:

SAFE 18 | WK: 7 | /10

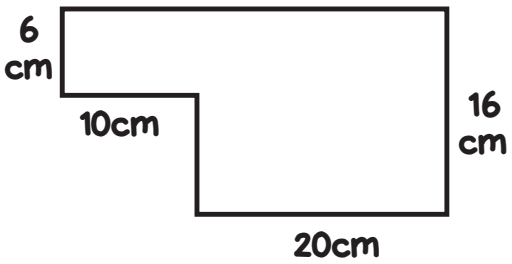
1

1275m = _____ km

4856ml = _____ L

1298g = _____ kg

2 What is the perimeter and area of the shape shown below?



Perimeter =

Area =

3

04:28AM

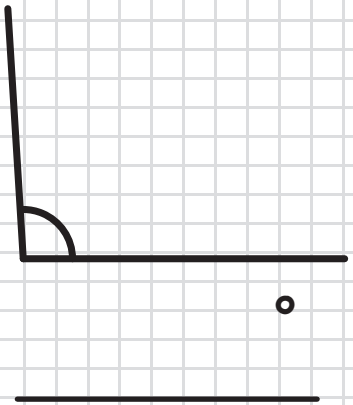
12 hour clock

What time was it 4 hours and 23 minutes later?

:

24 hour clock

4 Measure the size of angle 'a'?



5 $4 \times \frac{3}{9} =$

6 $3 \times 4\frac{7}{8} =$

7 25% of 200 =

8 Write as percentages

$\frac{1}{10}$ = _____

$\frac{10}{100}$ = _____

$\frac{1}{2}$ = _____

9 $3\frac{4}{9}$, $3\frac{8}{9}$, $4\frac{3}{9}$, $4\frac{7}{9}$, ...

next in the sequence is _____

10 (12 + 23) + (19 - 7) =

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

Andrell Education Ltd

NAME: CLASS: DATE:

SAFE 18 | WK: 8 | /10

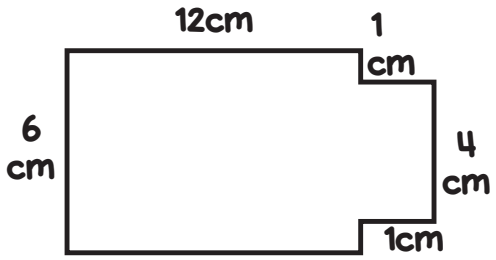
1

4.765km = _____ m

8.23L = _____ ml

3.261kg = _____ g

2 What is the perimeter and area of the shape shown below?



Perimeter =

Area =

3

09:18PM

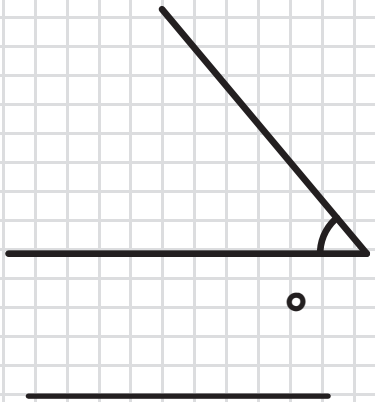
12 hour clock

What time was it 2 hours and 05 minutes later?

:

24 hour clock

4 Measure the size of angle 'a'?



5 $6 \times \frac{2}{7} =$

6 $4 \times 3\frac{1}{6} =$

7 20% of 120 =

8 Write as percentages

$\frac{1}{2}$ = _____

$\frac{3}{4}$ = _____

$\frac{1}{5}$ = _____

9 $5\frac{2}{4}, 5\frac{3}{4},$

$6, 6\frac{1}{4}, \ldots$

next in the sequence is _____

10 (20 - 12) x (4 + 5) =

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

Andrell Education Ltd

NAME: CLASS: DATE:

SAFE 18 | WK: 9 | /10

1

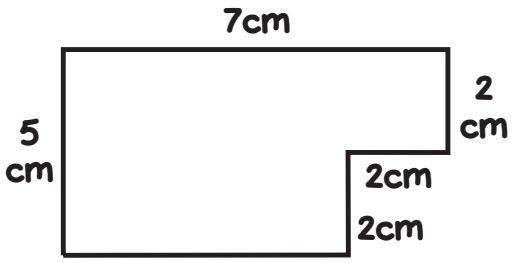
3648m = _____ km

7401ml = _____ L

5.34kg = _____ g

2

What is the perimeter and area of the shape shown below?



Perimeter =

Area =

3

17:42

24 hour clock

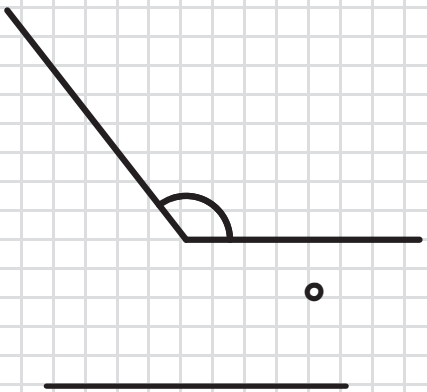
What time was it 3 hours and 59 minutes later?

:

12 hour clock

4

Measure the size of angle 'a'?



5

$3 \times \frac{4}{6} =$

6

$2 \times 5\frac{6}{9} =$

7

50% of 100 =

8

1% = _____

20% = _____

50% = _____

9

$6\frac{1}{9}, 6\frac{7}{9}, 7\frac{4}{9}, 8\frac{1}{9}, \ldots$

next in the sequence is _____

10

(15 + 9) - (3 x 4) =

MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....

Andrell Education Ltd

NAME: CLASS: DATE:

SAFE 18 | WK: 10 | /10

1

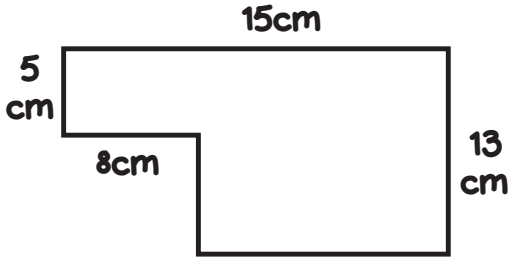
6.3km = _____ m

5.675L = _____ ml

2.721kg = _____ g

2

What is the perimeter and area of the shape shown below?



Perimeter =

Area =

3

08:12

24 hour clock

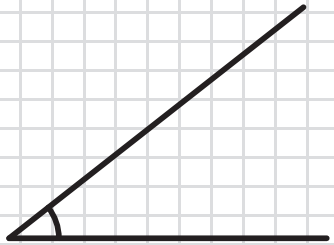
What time was it 1 hours and 48 minutes earlier?

:

12 hour clock

4

Measure the size of angle 'a'?



_____

5

$5 \times \frac{1}{3} =$

6

$3 \times 4\frac{4}{7} =$

7

25% of 160 =

8

10% = _____

25% = _____

75% = _____

9

$1\frac{2}{8}, 1\frac{7}{8},$

$2\frac{4}{8}, 3\frac{1}{8}, \ldots$

next in the sequence is _____

10

(3 x 7) - (21 - 10) =

MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....

Andrell Education Ltd

ANSWERS

SAFE 18 | WK: 1 | /10

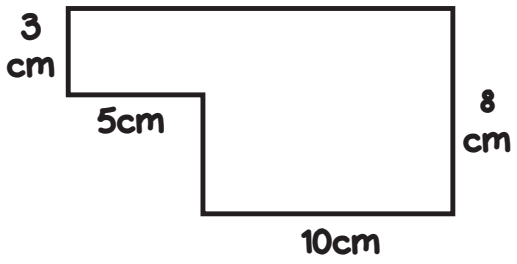
1

3.456 km = 3456 m

2.41 L = 2410 ml

408 g = 0.408 kg

2 What is the perimeter and area of the shape shown below?



Perimeter = 46cm

Area = 95cm²

3

10:45pm

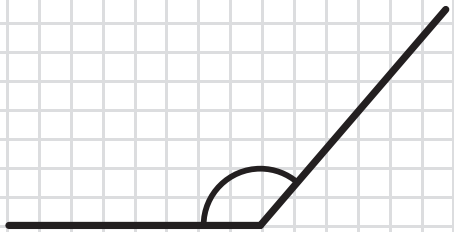
12 hour clock

What time was it 3 hours and 18 minutes earlier?

19:27

24 hour clock

4 Measure the size of the angle



130°

(127° to 133°)

5

$7 \times \frac{4}{5} =$

$\frac{28}{5}$ $5\frac{3}{5}$

6

$4 \times 3\frac{4}{5} =$

$15\frac{1}{5}$

7

20% of 150 =

30

8 Write as proper fractions

1% = $\frac{1}{100}$

10% = $\frac{1}{10}$

20% = $\frac{1}{5}$

9

$13\frac{1}{2}$, $14\frac{1}{4}$, 15, $15\frac{3}{4}$, ...

next in the sequence is $16\frac{1}{2}$

10

(3 x 5) - (4 - 1) =

12

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

Andrell Education Ltd

ANSWERS

SAFE 18 | WK: 2 | /10

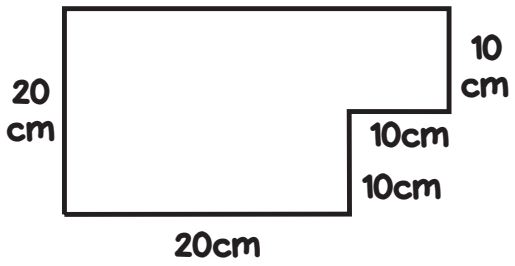
1

2340m = 2.34 km

1.113 L = 1113 ml

5421 g = 5.421 kg

2 What is the perimeter and area of the shape shown below?



Perimeter = 100cm

Area = 500cm²

3

08:22AM

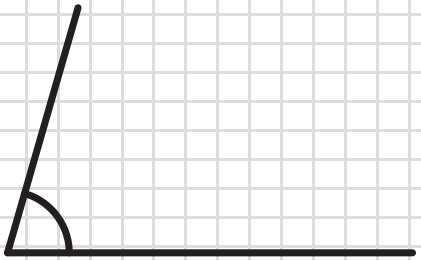
12 hour clock

What time was it 2 hours and 34 minutes later?

10:56

24 hour clock

4 Measure the size of the angle



74°

(71° to 77°)

5

$5 \times \frac{3}{8} =$

$\frac{15}{8}$ $1\frac{7}{8}$

6

$3 \times 5\frac{2}{3} =$

17

7

25% of 80 =

20

8 Write as proper fractions

10% = $\frac{1}{10}$

25% = $\frac{1}{4}$

20% = $\frac{1}{5}$

9

$8\frac{1}{4}$, $8\frac{1}{2}$, $8\frac{3}{4}$, 9, ...

next in the sequence is $9\frac{1}{4}$

10

(20 + 9) - (2 x 3) =

23

MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....

Andrell Education Ltd

ANSWERS

SAFE 18 | WK: 3 | /10

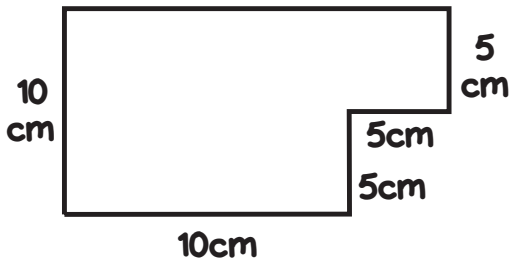
1

2.54km = 2540 m

7.45L = 7450 ml

8645g = 8.645 kg

2 What is the perimeter and area of the shape shown below?



Perimeter = 50cm

Area = 125cm²

3

19:32

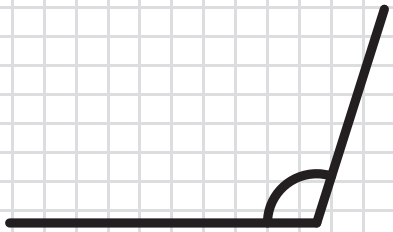
24 hour clock

What time was it 3 hours and 52 minutes earlier?

3:40

12 hour clock

4 Measure the size of the angle



107°

(104° to 110°)

5

$9 \times \frac{5}{6} =$

$\frac{45}{6}$ $7\frac{3}{6}$

6

$3 \times 5\frac{6}{8} =$

$17\frac{1}{4}$

7

20% of 60 =

12

8 Write as percentages

$\frac{10}{100}$ = 10%

$\frac{1}{5}$ = 20%

$\frac{1}{4}$ = 25%

9

$2\frac{2}{5}$, $2\frac{4}{5}$, $3\frac{1}{5}$, $3\frac{3}{5}$, ...

next in the sequence is 4

10

(3 - 1) x (3 + 2) =

10

MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....

Andrell Education Ltd

ANSWERS

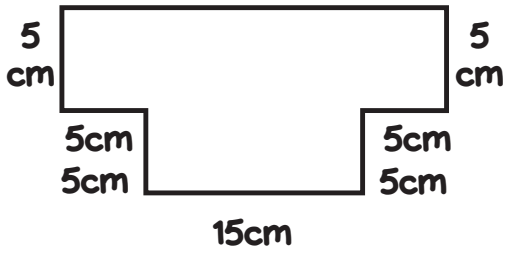
1

5034m = 5.034 km

3111ml = 3.111 L

2.34kg = 2340 g

2 What is the perimeter and area of the shape shown below?



Perimeter = 70cm

Area = 200cm²

3

15:21

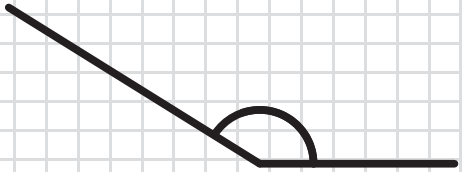
24 hour clock

What time was it 5 hours and 11 minutes earlier?

10:10AM

12 hour clock

4 Measure the size of angle 'a'?



148°

(145° to 151°)

5 $4 \times \frac{3}{5} =$

$\frac{12}{5}$ $2\frac{2}{5}$

6 $7 \times 3\frac{5}{7} =$

26

7 50% of 90 =

45

8 Write as percentages

$\frac{1}{10}$ = 10%

$\frac{1}{2}$ = 50%

$\frac{3}{4}$ = 75%

9 $1\frac{1}{6}$, $1\frac{4}{6}$, $2\frac{1}{6}$, $2\frac{4}{6}$, ...

next in the sequence is $3\frac{1}{6}$

10 (11 x 2) - (2 x 6) =

10

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

ANSWERS

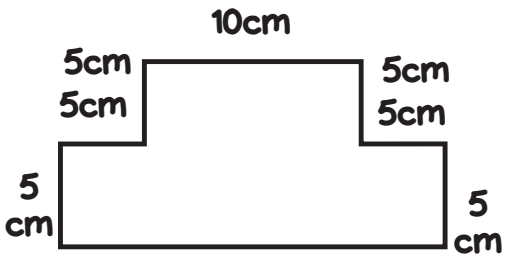
1

2.225km = 2225 m

7.32L = 7320 ml

3219g = 3.219 kg

2 What is the perimeter and area of the shape shown below?



Perimeter = 60cm

Area = 150cm²

3

11:05AM

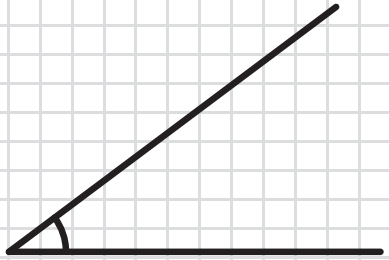
12 hour clock

What time was it 7 hours and 37 minutes earlier?

03:28

24 hour clock

4 Measure the size of the angle



36°
(33° to 39°)

5

$3 \times \frac{5}{7} =$

$\frac{15}{7}$ $2\frac{1}{7}$

6

$7 \times 5\frac{3}{8} =$

$37\frac{5}{8}$

7

25% of 140 =

35

8 Write as proper fractions

1% = $\frac{1}{100}$

50% = $\frac{1}{2}$

10% = $\frac{1}{10}$

9

$8\frac{2}{7}$, $8\frac{4}{7}$, $8\frac{6}{7}$, $9\frac{1}{7}$, ...

next in the sequence is $9\frac{3}{7}$

10

(22 + 9) + (24 ÷ 6) =

35

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

ANSWERS

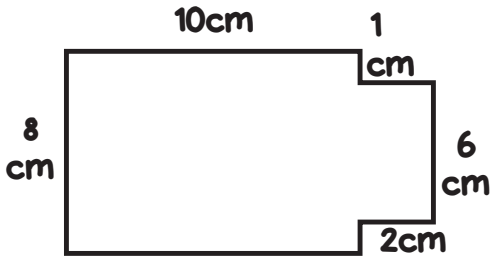
1

9.2km = 9200 m

3.415L = 3415 ml

7.62kg = 7620 g

2 What is the perimeter and area of the shape shown below?



Perimeter = 40cm

Area = 92cm²

3

11:32pm

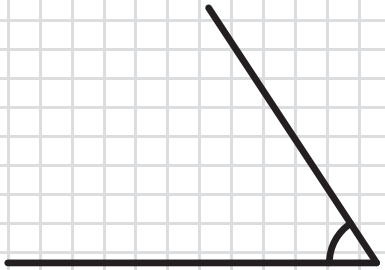
12 hour clock

What time was it 2 hours and 12 minutes earlier?

21:20

24 hour clock

4 Measure the size of the angle



57°

(54° to 60°)

5

$6 \times \frac{6}{8} =$

$\frac{36}{8}$ $4\frac{4}{8}$

6

$8 \times 2\frac{4}{5} =$

$22\frac{2}{5}$

7 50% of 180 =

90

8 Write as proper fractions

10% = $\frac{1}{10}$

25% = $\frac{1}{4}$

75% = $\frac{3}{4}$

9

$1\frac{1}{8}$, $1\frac{5}{8}$, $2\frac{1}{8}$, $2\frac{5}{8}$, ...

next in the sequence is $3\frac{1}{8}$

10 (16 ÷ 4) x (2 x 2) =

16

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

Andrell Education Ltd

ANSWERS

SAFE 18 | WK: 7 | /10

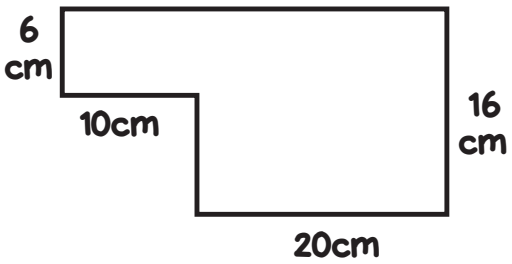
1

1275m = 1.275 km

4856ml = 4.856 L

1298g = 1.298 kg

2 What is the perimeter and area of the shape shown below?



Perimeter = 82cm

Area = 380cm²

3

04:28AM

12 hour clock

What time was it 4 hours and 23 minutes later?

08:51

24 hour clock

4 Measure the size of the angle

93°

(90° to 96°)

5 $4 \times \frac{3}{9} =$

$\frac{12}{9}$ $1\frac{3}{9}$

6 $3 \times 4\frac{7}{8} =$

$14\frac{5}{8}$

7 25% of 200 =

50

8 Write as percentages

$\frac{1}{10}$ = 10%

$\frac{10}{100}$ = 10%

$\frac{1}{2}$ = 50%

9 $3\frac{4}{9}$, $3\frac{8}{9}$, $4\frac{3}{9}$, $4\frac{7}{9}$, ...

next in the sequence is $5\frac{2}{9}$

10 (12 + 23) + (19 - 7) =

47

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

Andrell Education Ltd

ANSWERS

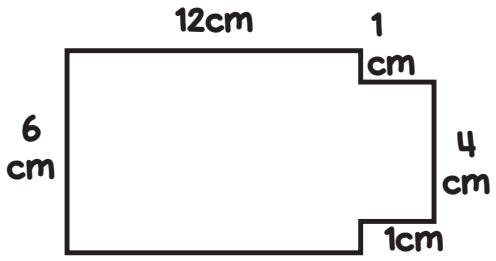
1

4.765km = 4765 m

8.23L = 8230 ml

3.261kg = 3261 g

2 What is the perimeter and area of the shape shown below?



Perimeter = 38cm

Area = 76cm²

3

09:18PM

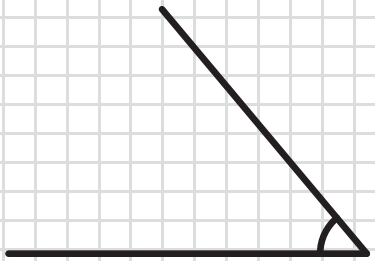
12 hour clock

What time was it 2 hours and 05 minutes later?

23:23

24 hour clock

4 Measure the size of the angle



50°
(47° to 53°)

5

$6 \times \frac{2}{7} =$

$\frac{12}{7}$ $1\frac{5}{7}$

6

$4 \times 3\frac{1}{6} =$

$12\frac{4}{6}$

7

20% of 120 =

24

8 Write as percentages

$\frac{1}{2}$ = 50%

$\frac{3}{4}$ = 75%

$\frac{1}{5}$ = 20%

9

$5\frac{2}{4}, 5\frac{3}{4},$

$6, 6\frac{1}{4}, \ldots$

next in the sequence is $6\frac{2}{4}$

10

(20 - 12) x (4 + 5) =

72

MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....

ANSWERS

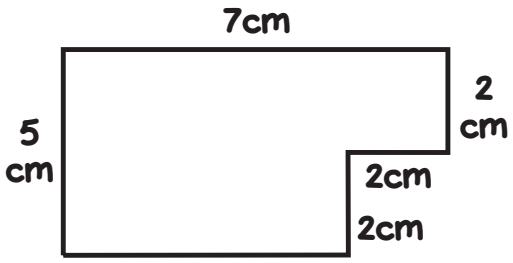
1

3648m = 3.648 km

7401ml = 7.401 L

5.34kg = 5340 g

2 What is the perimeter and area of the shape shown below?



Perimeter = 23cm

Area = 29cm²

3

17:42

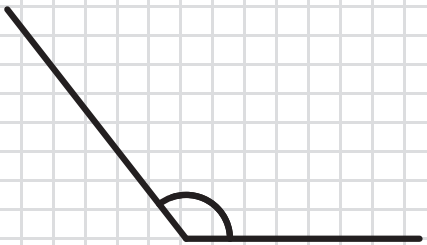
24 hour clock

What time was it 3 hours and 59 minutes later?

09:41pm

12 hour clock

4 Measure the size of the angle



128°

(125° to 131°)

5

$3 \times \frac{4}{6} =$

$\frac{12}{6}$ 2

6

$2 \times 5\frac{6}{9} =$

$11\frac{3}{9}$

7 50% of 100 =

50

8

1% = $\frac{1}{100}$

20% = $\frac{1}{5}$

50% = $\frac{1}{2}$

9 $6\frac{1}{9}$, $6\frac{7}{9}$, $7\frac{4}{9}$, $8\frac{1}{9}$, ...

next in the sequence is $8\frac{7}{9}$

10 (15 + 9) - (3 x 4) =

12

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

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ANSWERS

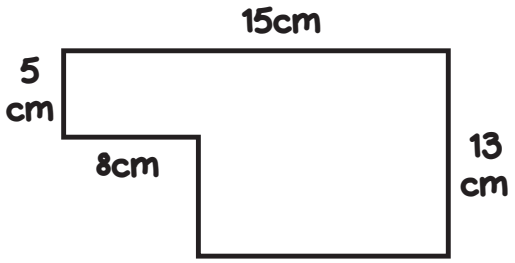
1

6.3km = 6300 m

5.675L = 5675 ml

2.721kg = 2721 g

2 What is the perimeter and area of the shape shown below?



Perimeter = 56cm

Area = 131cm²

3

08:12

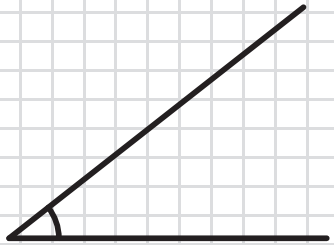
24 hour clock

What time was it 1 hours and 48 minutes earlier?

06:24AM

12 hour clock

4 Measure the size of the angle



38°

(35° to 41°)

5

$5 \times \frac{1}{3} =$

$\frac{5}{3}$ $1\frac{2}{3}$

6

$3 \times 4\frac{4}{7} =$

$13\frac{5}{7}$

7 25% of 160 =

40

8

10% = $\frac{1}{10}$

25% = $\frac{1}{4}$

75% = $\frac{3}{4}$

9

$1\frac{2}{8}$, $1\frac{7}{8}$, $2\frac{4}{8}$, $3\frac{1}{8}$, ...

next in the sequence is $3\frac{6}{8}$

10 (3 x 7) - (21 - 10) =

10

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....