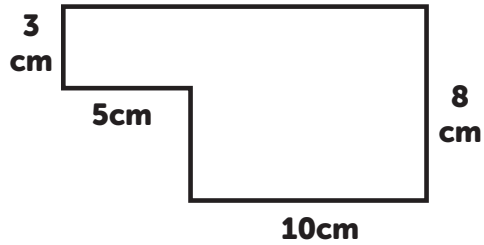


# Big Maths Beat That!: Teacher Notes

SAFE Challenge 16			
	Step Location in the SAFE framework		Title of Step
	Progress Drive	Step No.	
Q1	Amounts: Amounts of Distance	25	I can find the perimeter of compound shapes
Q2	Amounts: Amounts of Distance	26	I can use the total perimeter to find missing side lengths
Q3	Amounts: Amounts of Turn	17	I recognise 'reflex' angles
Q4	Amounts: Amounts of Turn	21	I can use my right angle Learn Its to find simple missing angles
Q5	Fractions: Fractions: Counting	17	I can round numbers with 2dp
Q6	Fractions: Fractions: Learn Its	8	I know $1/5 = 0.2$ , $2/5 = 0.4$ , $4/5 = 0.8$
Q7	Fractions: Fractions: Calculation	6	I can simplify fractions ready for ordering... and order them
Q8	Fractions: Fractions: Calculation	7	I can simplify fractions ready for calculating... and calculate with them
Q9	Dangerous Maths: Algebra	9	I can find a missing number by calculating first
Q10	Shape: Explore and Draw	24	I can recognise and draw diagonal lines

1

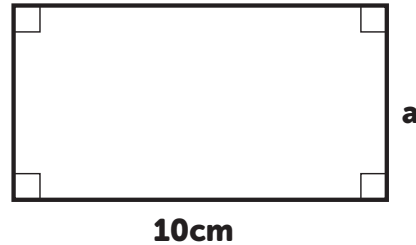
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 32cm

a =

5

Round to the nearest whole number.

4.73 →

7

&lt;, &gt; or =

$$\frac{6}{10} \quad \square \quad \frac{1}{2}$$

9

$$73 - 45 = \quad \times 7$$

6

Write as decimal equivalents:

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

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

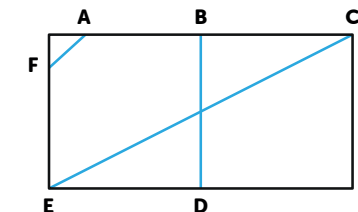
$$\frac{4}{5} =$$

8

$$\frac{10}{50} + \frac{2}{5} = \frac{\quad}{5}$$

10

Tick the diagonal line.



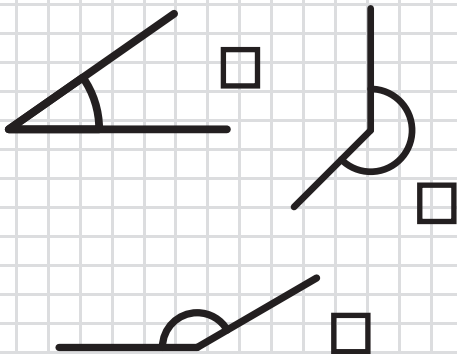
AF

BD

CE

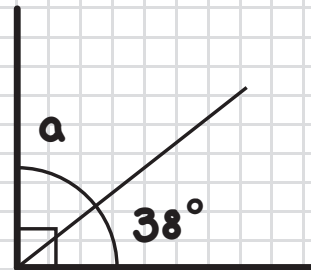
3

Tick the reflex angle



4

What is the size of angle 'a'?



\_\_\_\_\_

\_\_\_\_\_

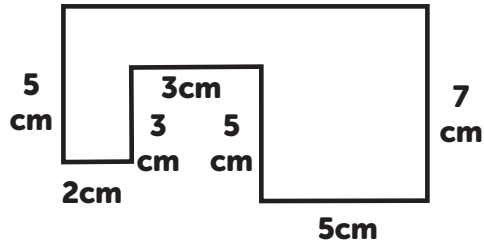
MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



1

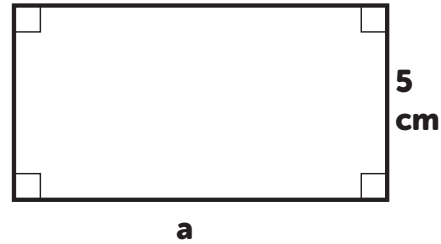
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 30cm

a =

5

Round to the nearest tenth.

6.12 →

7

&lt;, &gt; or =

 $\frac{1}{2}$    $\frac{10}{20}$ 

6

Write as decimal equivalents:

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

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

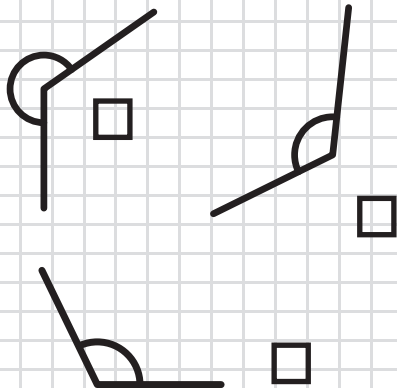
$$\frac{1}{5} =$$

8

$$\frac{4}{10} - \frac{1}{5} = \frac{\quad}{5}$$

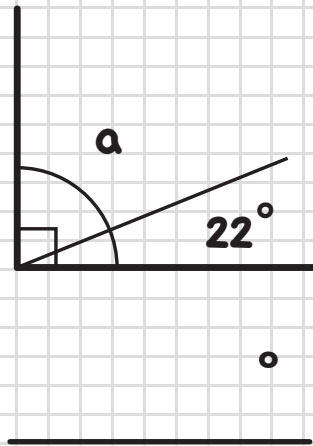
3

Tick the reflex angle



4

What is the size of angle 'a'?

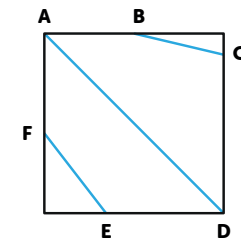


9

$$10 + 25 = \underline{\quad} \times 5$$

10

Tick the diagonal line.


 AD

 BC

 EF

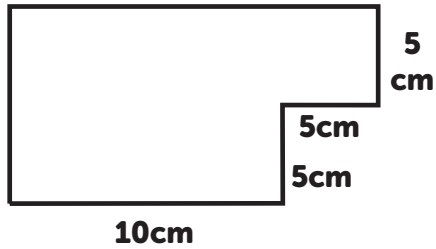
MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



1

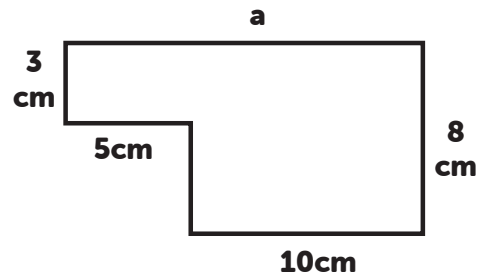
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 46cm

a =

5

Round to the nearest tenth.

1.65 →

7

&lt;, &gt; or =

$$\frac{2}{6} \quad \square \quad \frac{2}{3}$$

9

$$30 - 6 = \underline{\quad} \times 8$$

6

Write as decimal equivalents:

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

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

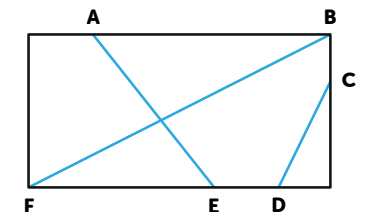
$$\frac{2}{5} =$$

8

$$\frac{5}{15} + \frac{1}{3} = \frac{\quad}{3}$$

10

Tick the diagonal line.



AE



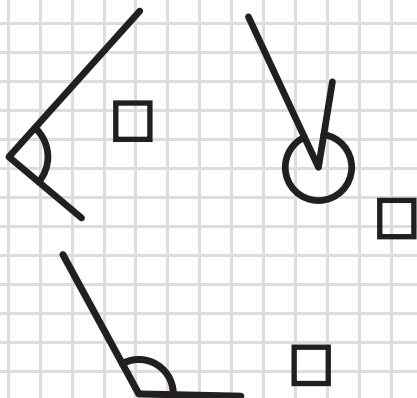
BF



CD

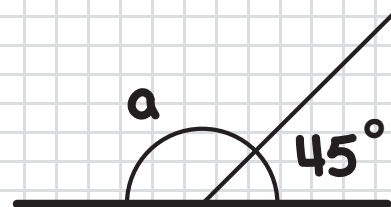
3

Tick the reflex angle



4

What is the size of angle 'a'?



\_\_\_\_\_

\_\_\_\_\_

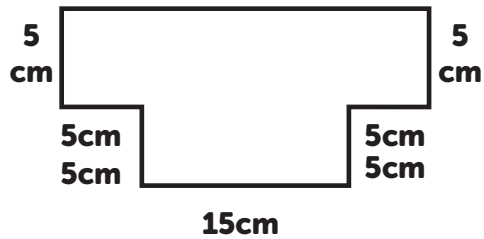
MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



1

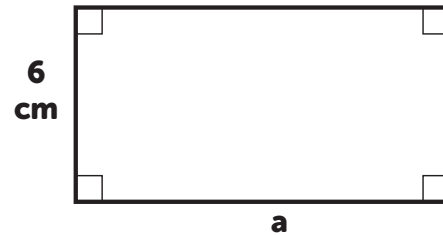
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 42cm

a =

5

Round to the nearest whole number.

3.14 →

7

&lt;, &gt; or =

$$\frac{2}{6} \quad \square \quad \frac{1}{3}$$

9

$$2 \times 8 = \underline{\quad} - 4$$

6

Write as decimal equivalents:

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

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

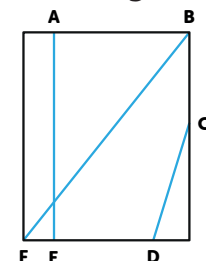
$$\frac{2}{5} =$$

8

$$\frac{4}{10} + \frac{1}{2} = \frac{\quad}{10}$$

10

Tick the diagonal line.

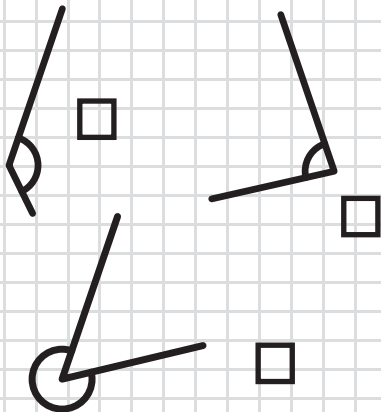

 AE

 BF

 CD

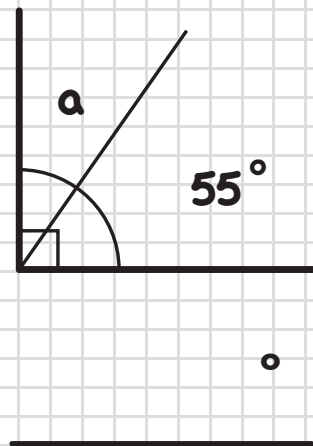
3

Tick the reflex angle



4

What is the size of angle 'a'?



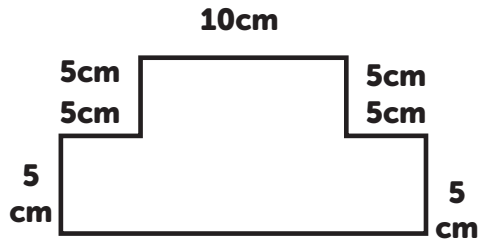
MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



1

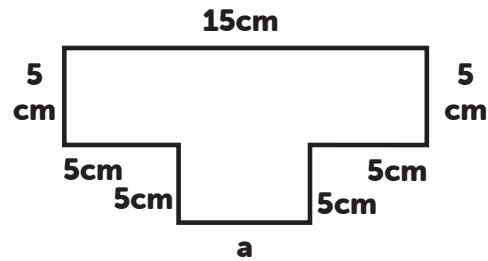
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 50cm

a =

3

Round to the nearest tenth.

7.35 →

7

&lt;, &gt; or =

 $\frac{10}{30}$    $\frac{1}{3}$ 

9

 $22 - 2 = \underline{\quad} + 11$ 

6

Write as decimal equivalents:

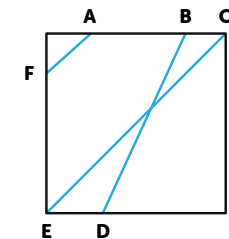
 $\frac{2}{5} =$  $\frac{4}{5} =$  $\frac{1}{5} =$ 

8

 $\frac{2}{6} + \frac{1}{3} = \frac{\quad}{3}$ 

10

Tick the diagonal line.

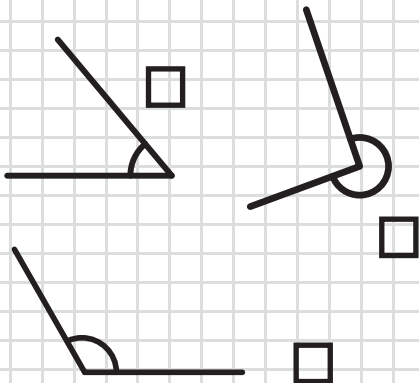

  
AF

  
BD

  
CE

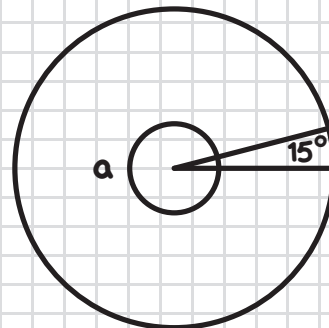
3

Tick the reflex angle



4

What is the size of angle 'a'?



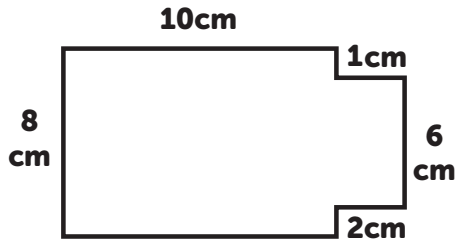
MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



1

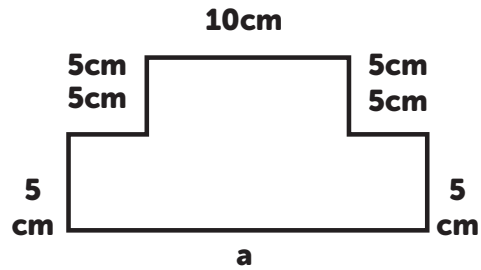
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 60cm

a =

5

Round to the nearest tenth.

4.71 →

7

&lt;, &gt; or =

$$\frac{2}{3} \quad \square \quad \frac{10}{30}$$

9

$$3 \times 6 = \underline{\quad} \div 2$$

6

Write as decimal equivalents:

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

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

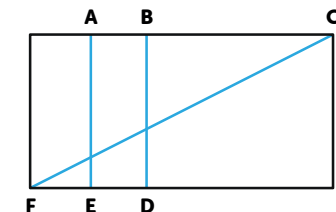
$$\frac{1}{5} =$$

8

$$\frac{10}{30} + \frac{1}{3} = \frac{\quad}{3}$$

10

Tick the diagonal line.



AE



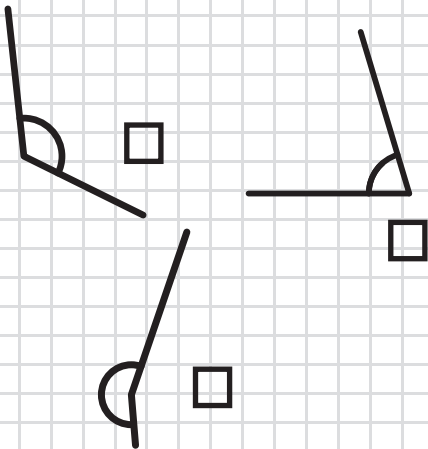
BD



CF

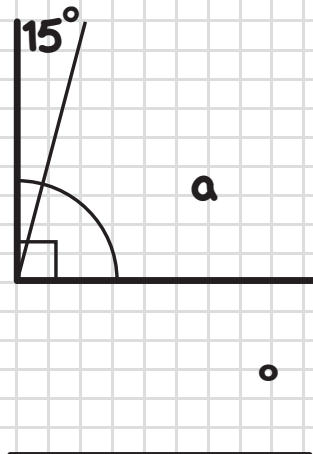
3

Tick the reflex angle



4

What is the size of angle 'a'?



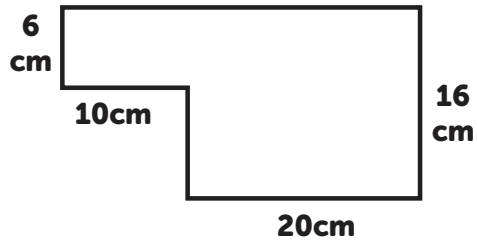
MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



1

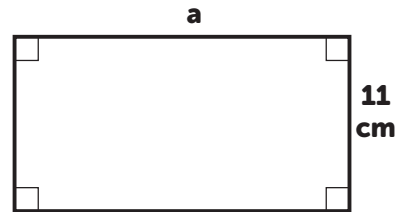
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 62cm

a =

5

Round to the nearest whole number.

2.54 →

7

&lt;, &gt; or =

 $\frac{2}{3}$    $\frac{5}{15}$ 

9

 $40 \div 5 = 2 \times$  \_\_\_\_\_

6

Write as decimal equivalents:

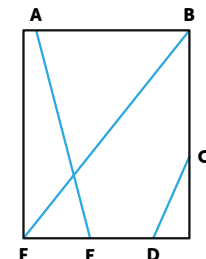
 $\frac{1}{5} =$  $\frac{4}{5} =$  $\frac{2}{5} =$ 

8

 $\frac{2}{3} - \frac{10}{30} = \frac{\quad}{3}$ 

10

Tick the diagonal line.



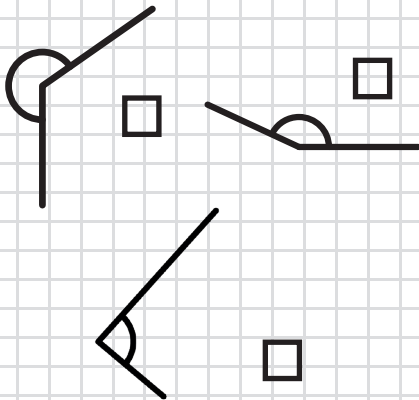
AE

BF

CD

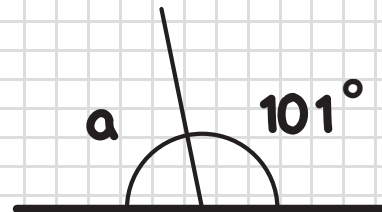
3

Tick the reflex angle



4

What is the size of angle 'a'?



\_\_\_\_\_

MY LAST SCORE?! .....

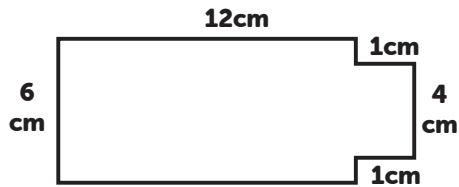
HAVE I BEAT THAT?! .....





1

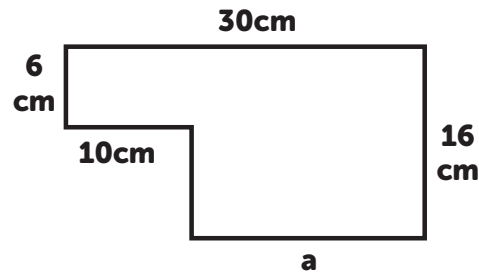
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 82cm

a =

5

Round to the nearest tenth.

9.37 →

7

&lt;, &gt; or =

$$\frac{1}{5} \quad \square \quad \frac{4}{10}$$

9

$$\underline{\quad} \times 5 = 27 + 8$$

6

Write as decimal equivalents:

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

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

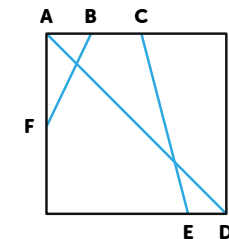
$$\frac{4}{5} =$$

8

$$\frac{8}{10} - \frac{1}{5} = \frac{\quad}{5}$$

10

Tick the diagonal line.

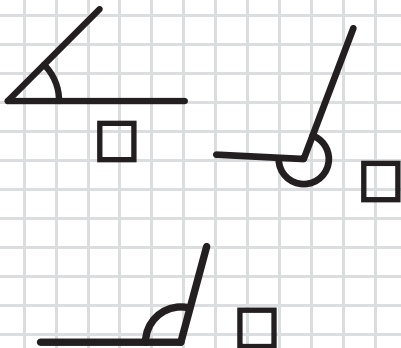

 AD

 BF

 CE

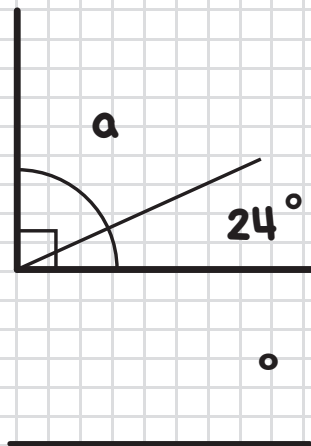
3

Tick the reflex angle



4

What is the size of angle 'a'?



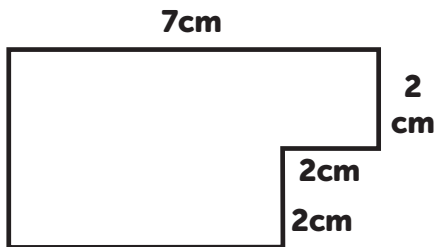
MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



1

What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 16cm

a =

5

Round to the nearest tenth.

1.74 →

7

&lt;, &gt; or =

$$\frac{10}{50} \quad \square \quad \frac{1}{5}$$

9

$$\underline{\hspace{2cm}} \div 5 = 40 \div 8$$

6

Write as decimal equivalents:

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

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

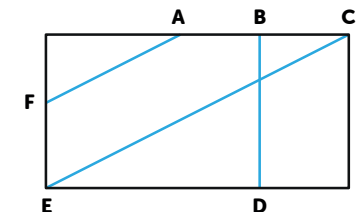
$$\frac{2}{5} =$$

8

$$\frac{20}{30} - \frac{1}{3} = \frac{\hspace{1cm}}{3}$$

10

Tick the diagonal line.



AF



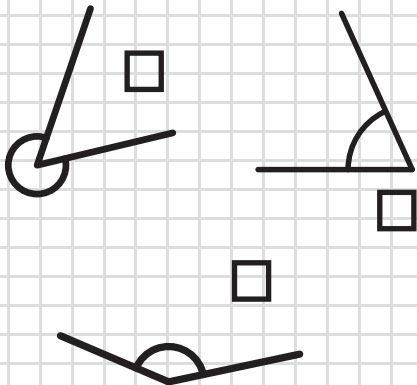
BD



CE

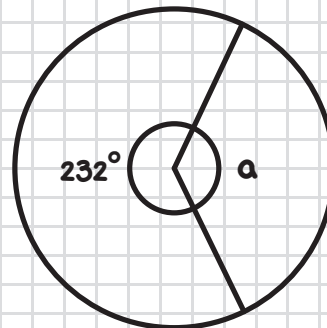
3

Tick the reflex angle



4

What is the size of angle 'a'?



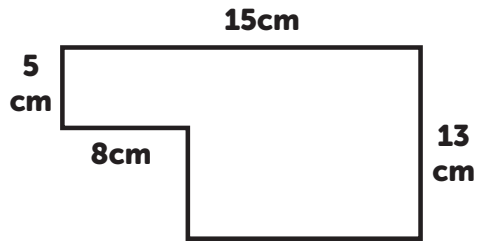
MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



1

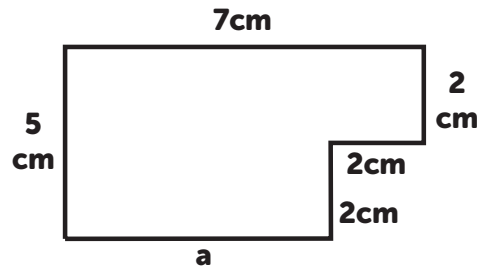
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 23cm

a =

5

Round to the nearest tenth.

3.72 →

7

&lt;, &gt; or =

$$\frac{2}{5} \quad \square \quad \frac{10}{50}$$

9

$$\underline{\quad} \times 5 = 20 - 5$$

6

Write as decimal equivalents:

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

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

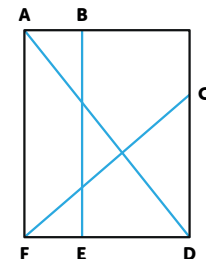
$$\frac{1}{5} =$$

8

$$\frac{1}{2} + \frac{2}{10} = \frac{\quad}{10}$$

10

Tick the diagonal line.

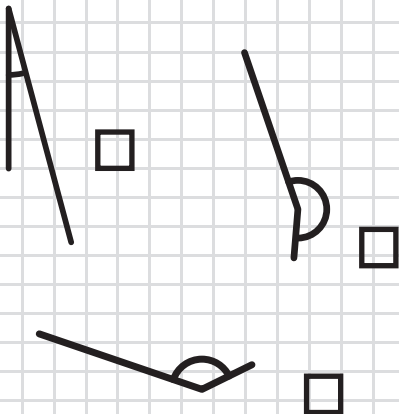

 AD

 BE

 CF

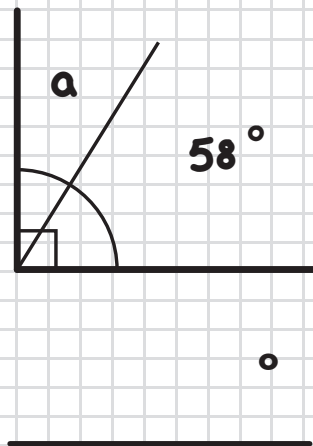
3

Tick the reflex angle



4

What is the size of angle 'a'?



MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



# ANSWERS

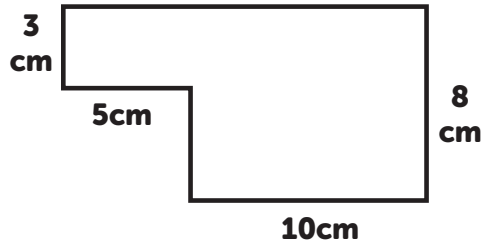
SAFE 16

SET: 1

/10

1

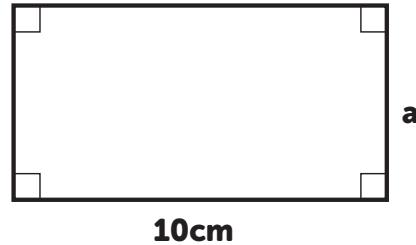
What is the perimeter?



Perimeter = **46cm**

2

What is the length of side a?



Perimeter = 32cm

a = **6cm**

5

Round to the nearest whole number.

**4.73** → **5**

6

Write as decimal equivalents:

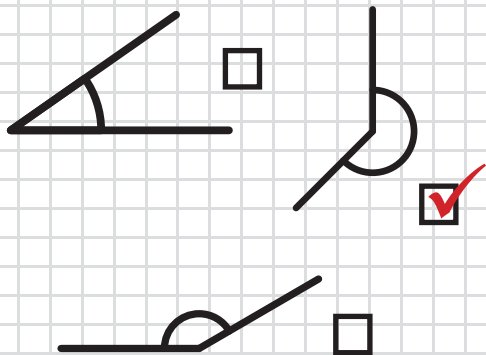
$$\frac{1}{5} = \mathbf{0.2}$$

$$\frac{2}{5} = \mathbf{0.4}$$

$$\frac{4}{5} = \mathbf{0.8}$$

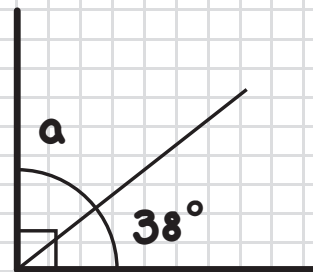
3

Tick the reflex angle



4

What is the size of angle 'a'?



**52**

7

<, > or =

$$\frac{6}{10} \quad \boxed{>} \quad \frac{1}{2}$$

8

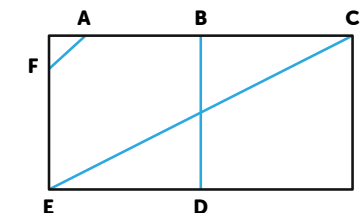
$$\frac{10}{50} + \frac{2}{5} = \frac{3}{5}$$

9

$$73 - 45 = \mathbf{4} \times 7$$

10

Tick the diagonal line.



AF       BD       CE



MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



# ANSWERS

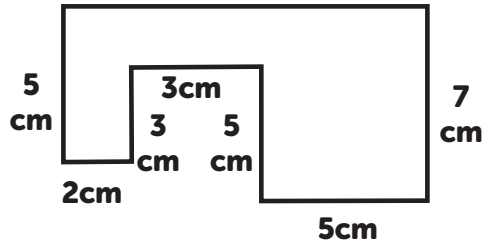
SAFE 16

SET: 2

/10

1

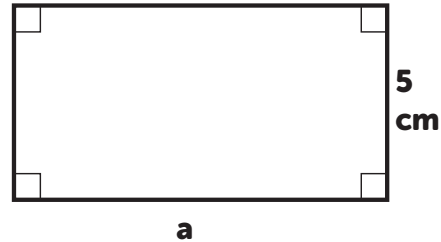
What is the perimeter?



Perimeter = **40cm**

2

What is the length of side a?



Perimeter = 30cm

a = **10cm**

5

Round to the nearest tenth.

**6.12** → **6.1**

6

Write as decimal equivalents:

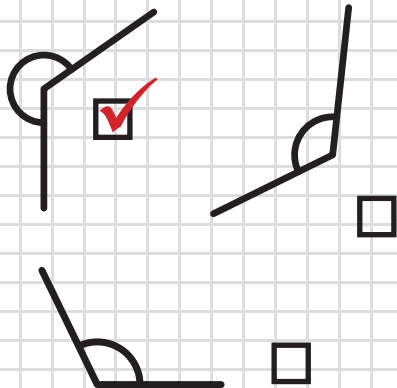
$$\frac{2}{5} = \mathbf{0.4}$$

$$\frac{4}{5} = \mathbf{0.8}$$

$$\frac{1}{5} = \mathbf{0.2}$$

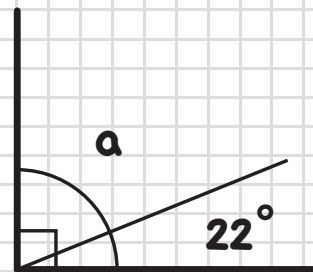
3

Tick the reflex angle



4

What is the size of angle 'a'?



**68**

7

<, > or =

$$\frac{1}{2} \quad \boxed{=} \quad \frac{10}{20}$$

8

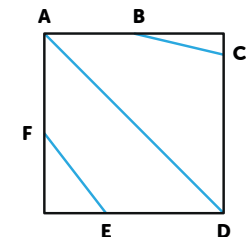
$$\frac{4}{10} - \frac{1}{5} = \frac{1}{5}$$

9

$$10 + 25 = \mathbf{7} \times 5$$

10

Tick the diagonal line.



AD

BC

EF



MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



# ANSWERS

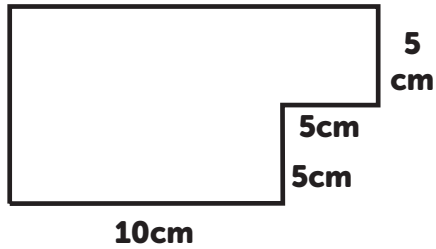
SAFE 16

SET: 3

/10

1

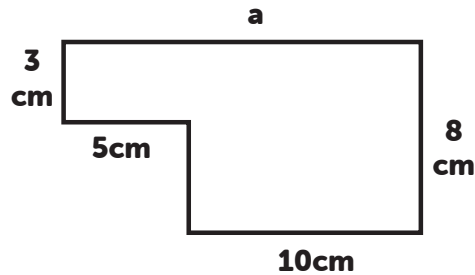
What is the perimeter?



Perimeter = **50cm**

2

What is the length of side a?



Perimeter = 46cm

a = **15cm**

5

Round to the nearest tenth.

**1.65** → **1.7**

7

<, > or =

$\frac{2}{6}$    $\frac{2}{3}$

9

$30 - 6 = \underline{\quad} \times 8$

6

Write as decimal equivalents:

$\frac{1}{5} = \mathbf{0.2}$

$\frac{4}{5} = \mathbf{0.8}$

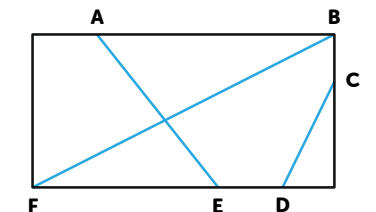
$\frac{2}{5} = \mathbf{0.4}$

8

$\frac{5}{15} + \frac{1}{3} = \frac{\mathbf{2}}{3}$

10

Tick the diagonal line.



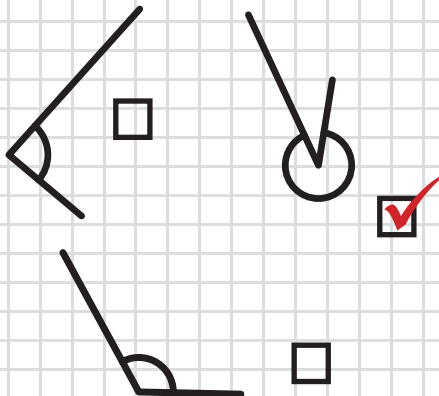
AE

BF

CD

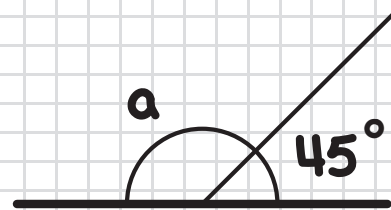
3

Tick the reflex angle



4

What is the size of angle 'a'?



**135**

MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



# ANSWERS

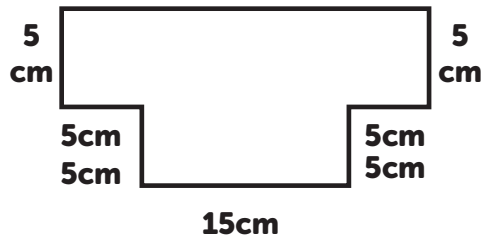
SAFE 16

SET: 4

/10

1

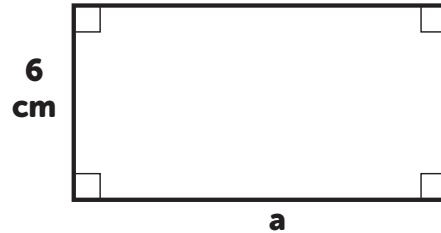
What is the perimeter?



Perimeter = **70cm**

2

What is the length of side a?



Perimeter = 42cm

a = **15cm**

5

Round to the nearest whole number.

**3.14** → **3**

6

Write as decimal equivalents:

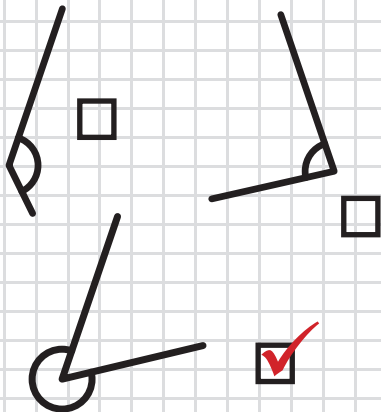
$$\frac{4}{5} = \mathbf{0.8}$$

$$\frac{1}{5} = \mathbf{0.2}$$

$$\frac{2}{5} = \mathbf{0.4}$$

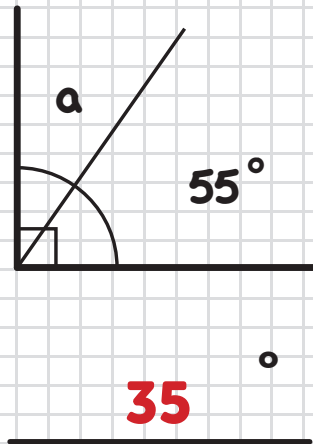
3

Tick the reflex angle



4

What is the size of angle 'a'?



**35**

7

<, > or =

$$\frac{2}{6} \quad \boxed{=} \quad \frac{1}{3}$$

8

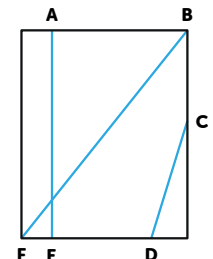
$$\frac{4}{10} + \frac{1}{2} = \frac{9}{10}$$

9

$$2 \times 8 = \mathbf{20} - 4$$

10

Tick the diagonal line.



AE

BF

CD



MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



# ANSWERS

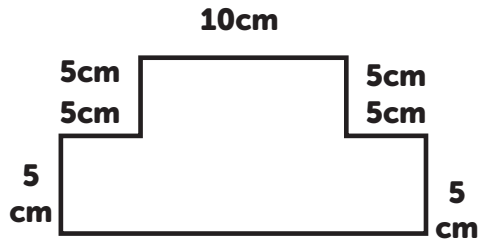
SAFE 16

SET: 5

/10

1

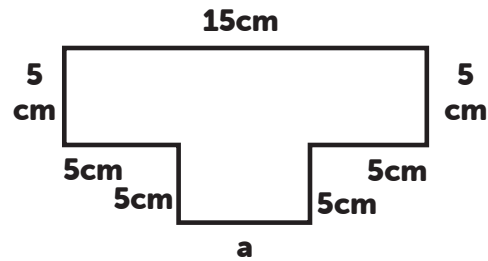
What is the perimeter?



Perimeter = **60cm**

2

What is the length of side a?



Perimeter = 50cm

a = **5cm**

3

Round to the nearest tenth.

**7.35** → **7.4**

4

Write as decimal equivalents:

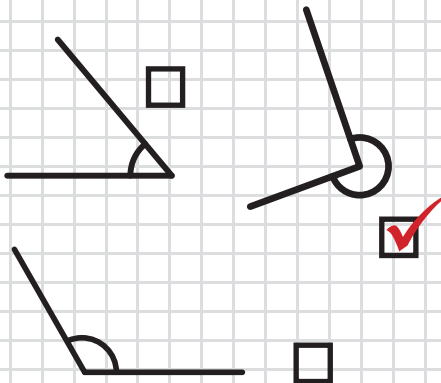
$$\frac{2}{5} = \mathbf{0.4}$$

$$\frac{4}{5} = \mathbf{0.8}$$

$$\frac{1}{5} = \mathbf{0.2}$$

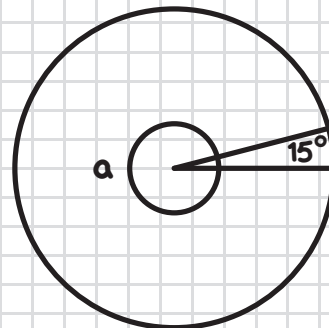
5

Tick the reflex angle



6

What is the size of angle 'a'?



**345**

7

<, > or =

$$\frac{10}{30} \quad \boxed{=} \quad \frac{1}{3}$$

8

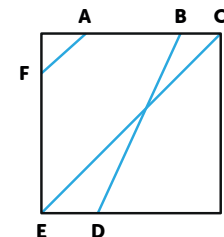
$$\frac{2}{6} + \frac{1}{3} = \frac{2}{3}$$

9

$$22 - 2 = \mathbf{9} + 11$$

10

Tick the diagonal line.



AF

BD

CE

MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....





# ANSWERS

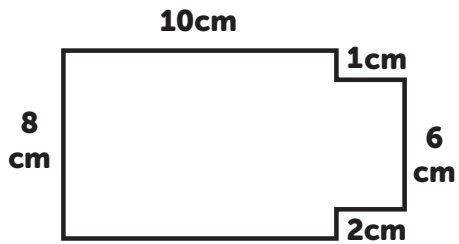
SAFE 16

SET: 6

/10

1

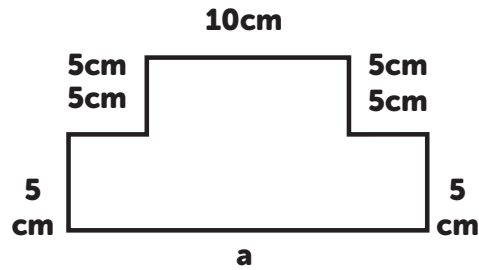
What is the perimeter?



Perimeter = **40cm**

2

What is the length of side a?



Perimeter = 60cm

a = **20cm**

5

Round to the nearest tenth.

$$4.71 \rightarrow 4.7$$

7

<, > or =

$$\frac{2}{3} \quad \boxed{>} \quad \frac{10}{30}$$

9

$$3 \times 6 = \underline{36} \div 2$$

6

Write as decimal equivalents:

$$\frac{4}{5} = \mathbf{0.8}$$

$$\frac{2}{5} = \mathbf{0.4}$$

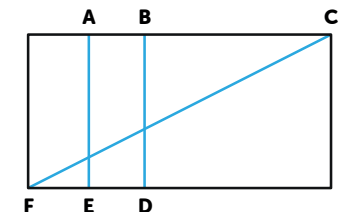
$$\frac{1}{5} = \mathbf{0.2}$$

8

$$\frac{10}{30} + \frac{1}{3} = \frac{2}{3}$$

10

Tick the diagonal line.



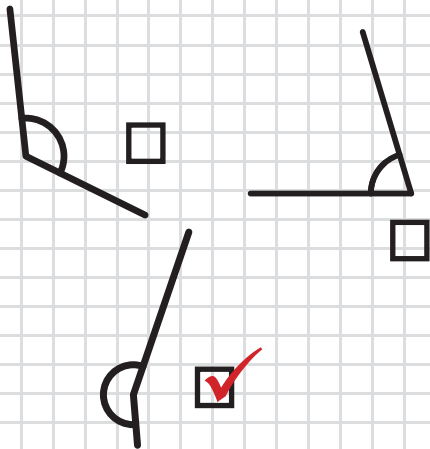
AE

BD

CF

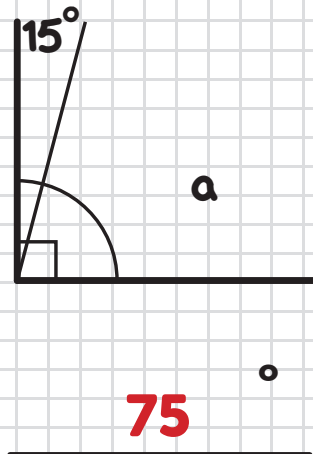
3

Tick the reflex angle



4

What is the size of angle 'a'?



**75**

MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



# ANSWERS

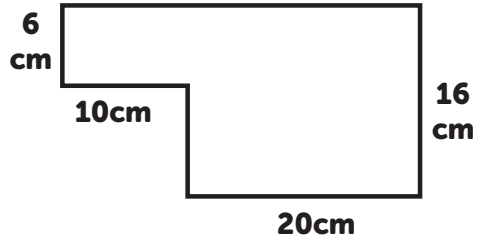
SAFE 16

SET: 7

/10

1

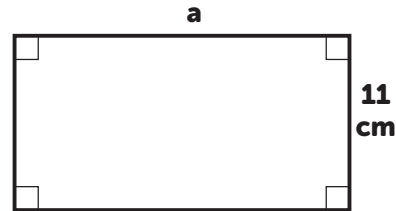
What is the perimeter?



Perimeter = **92cm**

2

What is the length of side a?



Perimeter = 62cm

a = **20cm**

5

Round to the nearest whole number.

**2.54** → **3**

6

Write as decimal equivalents:

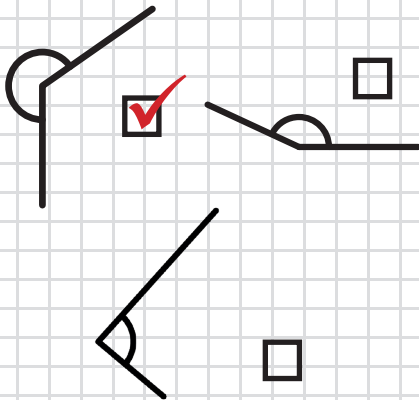
$$\frac{1}{5} = \mathbf{0.2}$$

$$\frac{4}{5} = \mathbf{0.8}$$

$$\frac{2}{5} = \mathbf{0.4}$$

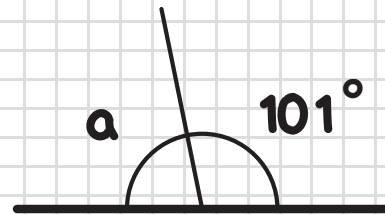
3

Tick the reflex angle



4

What is the size of angle 'a'?



**79**

7

<, > or =

$$\frac{2}{3} \quad \boxed{>} \quad \frac{5}{15}$$

8

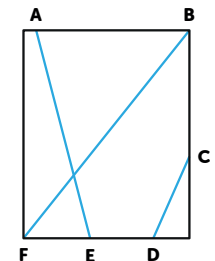
$$\frac{2}{3} - \frac{10}{30} = \frac{1}{3}$$

9

$$40 \div 5 = 2 \times \underline{\mathbf{4}}$$

10

Tick the diagonal line.



AE

BF

CD



MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



# ANSWERS

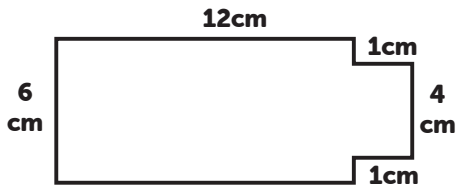
SAFE 16

SET: 8

/10

1

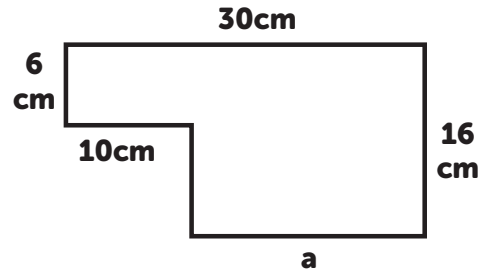
What is the perimeter?



Perimeter = **38cm**

2

What is the length of side a?



Perimeter = 82cm

a = **20cm**

5

Round to the nearest tenth.

**9.37** → **9.4**

6

Write as decimal equivalents:

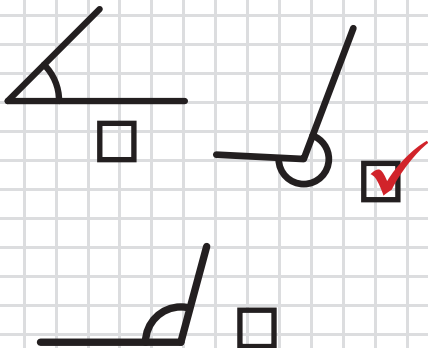
$$\frac{2}{5} = \mathbf{0.4}$$

$$\frac{1}{5} = \mathbf{0.2}$$

$$\frac{4}{5} = \mathbf{0.8}$$

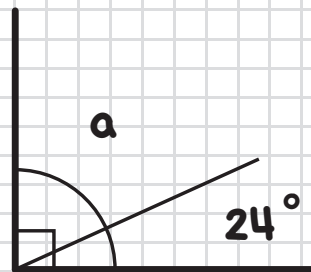
3

Tick the reflex angle



4

What is the size of angle 'a'?



**66**

7

<, > or =

$$\frac{1}{5} \quad \boxed{<} \quad \frac{4}{10}$$

8

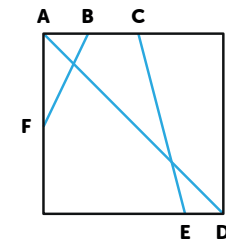
$$\frac{8}{10} - \frac{1}{5} = \frac{3}{5}$$

9

$$\mathbf{7} \times 5 = 27 + 8$$

10

Tick the diagonal line.



AD

BF

CE



MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



# ANSWERS

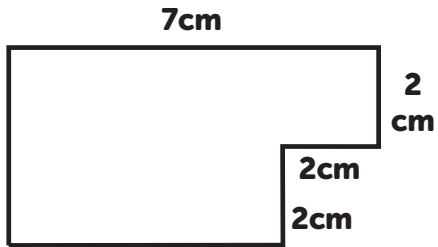
SAFE 16

SET: 9

/10

1

What is the perimeter?



Perimeter = **22cm**

2

What is the length of side a?



Perimeter = 16cm

a = **3cm**

5

Round to the nearest tenth.

**1.74** → **1.7**

7

<, > or =

$\frac{10}{50}$    $\frac{1}{5}$

6

Write as decimal equivalents:

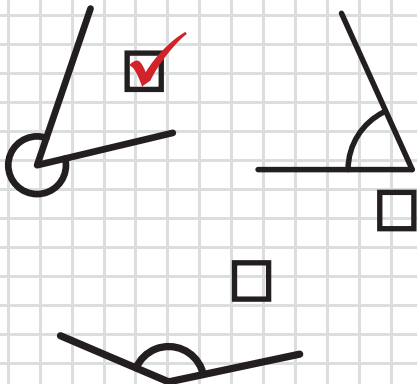
$\frac{1}{5} = \mathbf{0.2}$

$\frac{4}{5} = \mathbf{0.8}$

$\frac{2}{5} = \mathbf{0.4}$

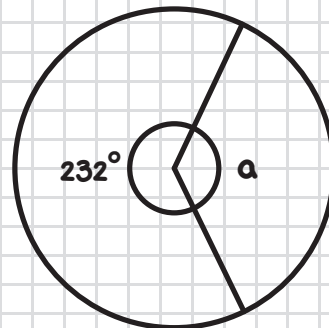
3

Tick the reflex angle



4

What is the size of angle 'a'?



**128**

9

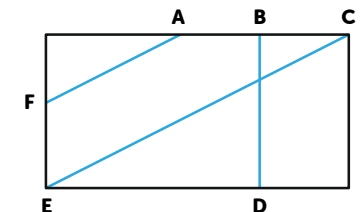
**25** ÷ 5 = **40** ÷ 8

8

$\frac{20}{30} - \frac{1}{3} = \frac{1}{3}$

10

Tick the diagonal line.



AF

BD

CE



MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....



# ANSWERS

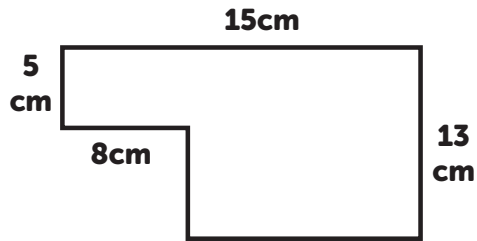
SAFE 16

SET: 10

/10

1

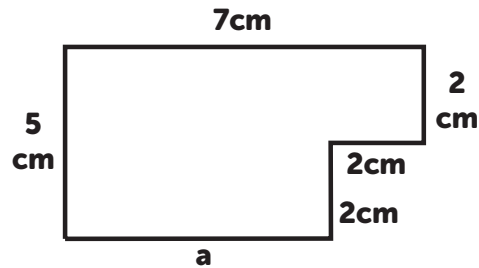
What is the perimeter?



Perimeter = **56cm**

2

What is the length of side a?



Perimeter = 23cm

a = **5cm**

5

Round to the nearest tenth.

**3.72** → **3.7**

6

Write as decimal equivalents:

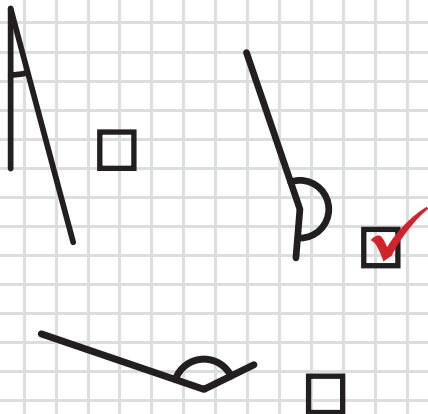
$$\frac{2}{5} = \mathbf{0.4}$$

$$\frac{4}{5} = \mathbf{0.8}$$

$$\frac{1}{5} = \mathbf{0.2}$$

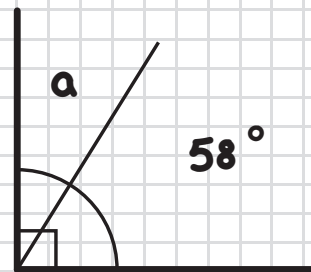
3

Tick the reflex angle



4

What is the size of angle 'a'?



**32**

7

<, > or =

$$\frac{2}{5} \quad \boxed{>} \quad \frac{10}{50}$$

8

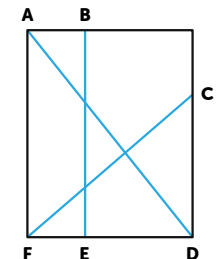
$$\frac{1}{2} + \frac{2}{10} = \frac{7}{10}$$

9

$$\mathbf{3} \times 5 = 20 - 5$$

10

Tick the diagonal line.



AD

BE

CF



MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....

