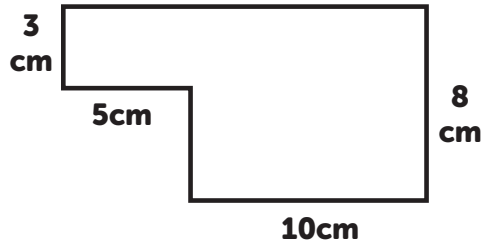


Big Maths Beat That!: Teacher Notes

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 $\frac{1}{5} = 0.2$, $\frac{2}{5} = 0.4$, $\frac{4}{5} = 0.8$
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

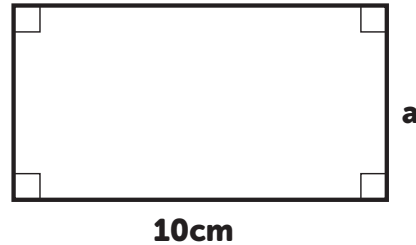
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 32cm

a =

5

Round to the nearest whole number.

4.73 →

6

Write as decimal equivalents:

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

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

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

7

<, > or =

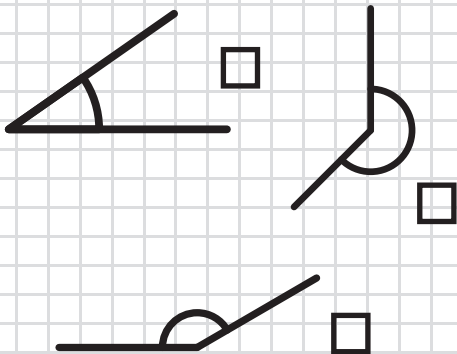
$$\frac{6}{10} \quad \square \quad \frac{1}{2}$$

8

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

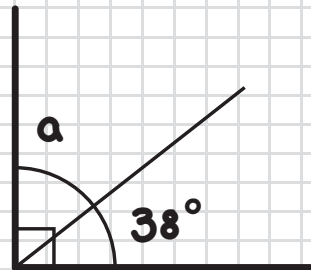
3

Tick the reflex angle



4

What is the size of angle 'a'?

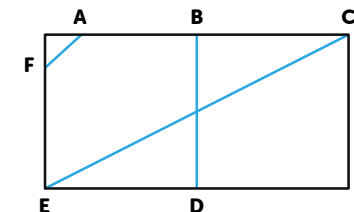


9

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

10

Tick the diagonal line.



AF



BD



CE

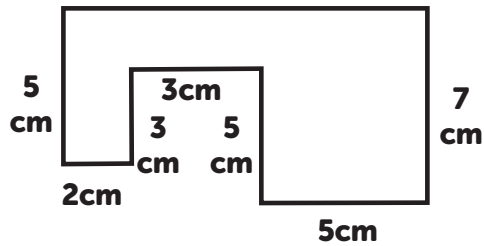


MY LAST SCORE?!

HAVE I BEAT THAT?!

1

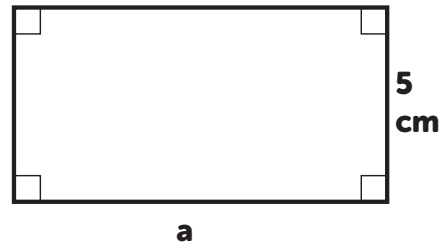
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 30cm

a =

5

Round to the nearest tenth.

6.12 →

6

Write as decimal equivalents:

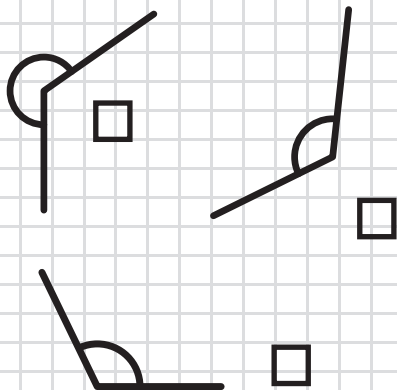
$$\frac{2}{5} =$$

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

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

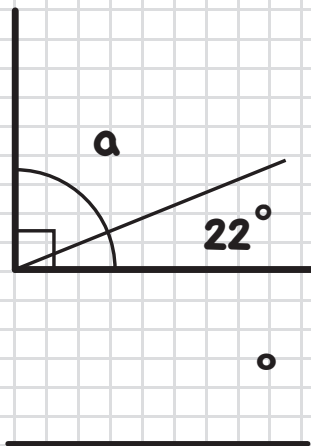
3

Tick the reflex angle



4

What is the size of angle 'a'?



7

<, > or =

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

8

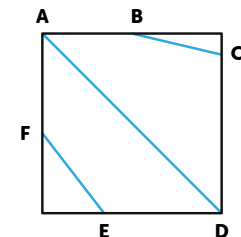
$$\frac{4}{10} - \frac{1}{5} = \frac{\quad}{5}$$

9

$$10 + 25 = \quad \times 5$$

10

Tick the diagonal line.


☐ AD

☐ BC

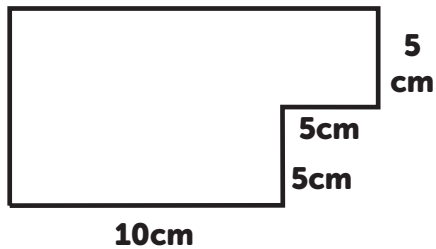
☐ EF


MY LAST SCORE?!

HAVE I BEAT THAT?!

1

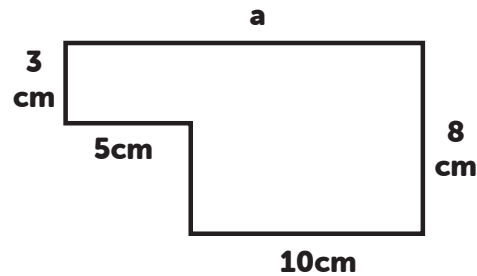
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 46cm

a =

5

Round to the nearest tenth.

1.65 →

6

Write as decimal equivalents:

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

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

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

7

<, > or =

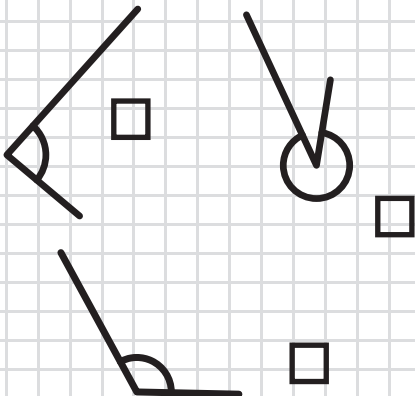
$$\frac{2}{6} \quad \square \quad \frac{2}{3}$$

8

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

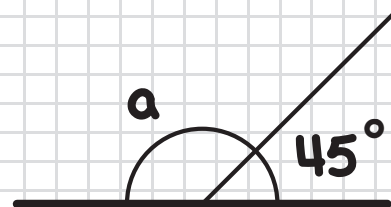
3

Tick the reflex angle



4

What is the size of angle 'a'?

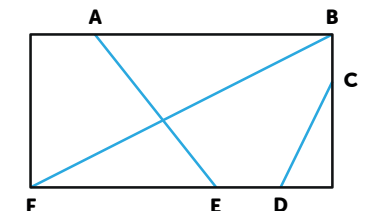


9

$$30 - 6 = \quad \times 8$$

10

Tick the diagonal line.


☐ AE

☐ BF

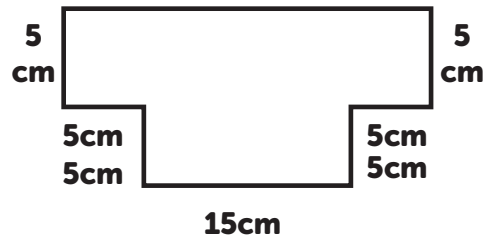
☐ CD


MY LAST SCORE?!

HAVE I BEAT THAT?!

1

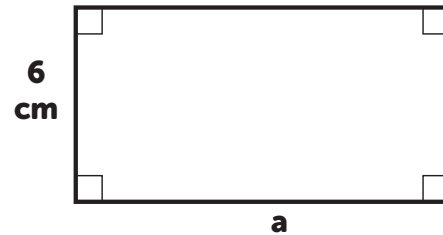
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 42cm

a =

5

Round to the nearest whole number.

3.14 →

6

Write as decimal equivalents:

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

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

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

7

<, > or =

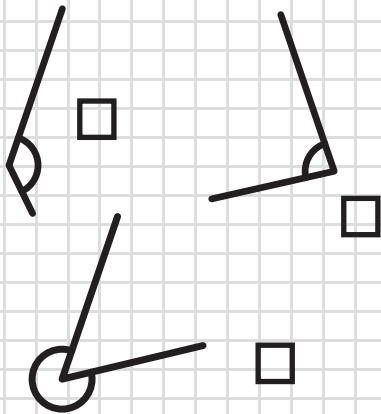
$$\frac{2}{6} \quad \square \quad \frac{1}{3}$$

8

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

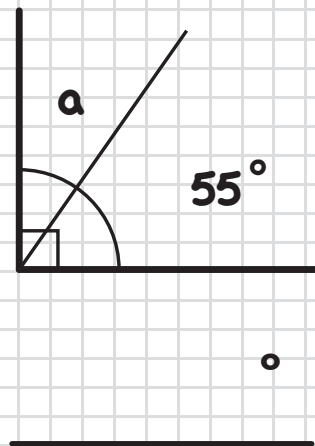
3

Tick the reflex angle



4

What is the size of angle 'a'?

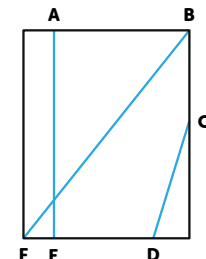


9

$$2 \times 8 = \quad - 4$$

10

Tick the diagonal line.


☐ AE

☐ BF

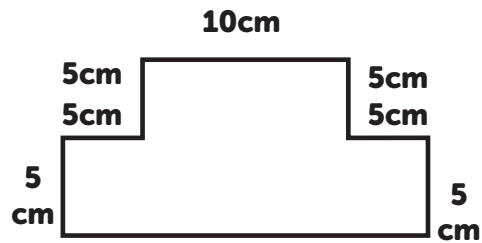
☐ CD


MY LAST SCORE?!

HAVE I BEAT THAT?!

1

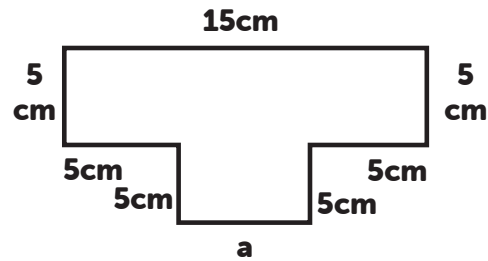
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 50cm

a =

5

Round to the nearest tenth.

7.35 →

6

Write as decimal equivalents:

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

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

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

7

<, > or =

$$\frac{10}{30}$$



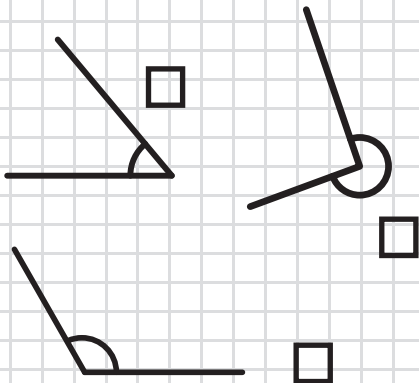
$$\frac{1}{3}$$

8

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

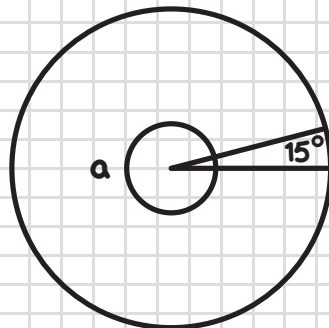
3

Tick the reflex angle



4

What is the size of angle 'a'?

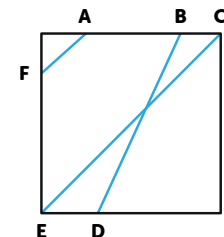


9

$$22 - 2 = \quad + 11$$

10

Tick the diagonal line.


☐ AF

☐ BD

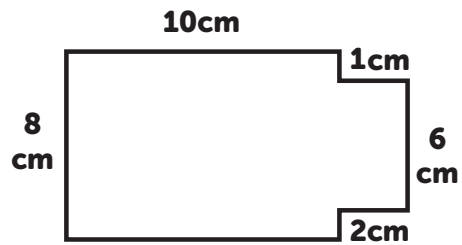
☐ CE


MY LAST SCORE?!

HAVE I BEAT THAT?!

1

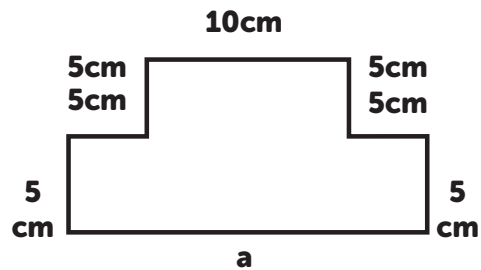
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 60cm

a =

5

Round to the nearest tenth.

4.71 →

6

Write as decimal equivalents:

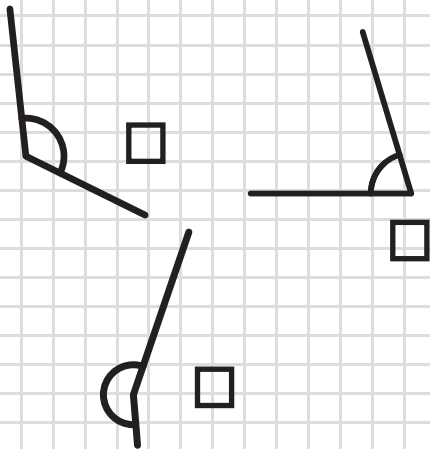
$$\frac{4}{5} =$$

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

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

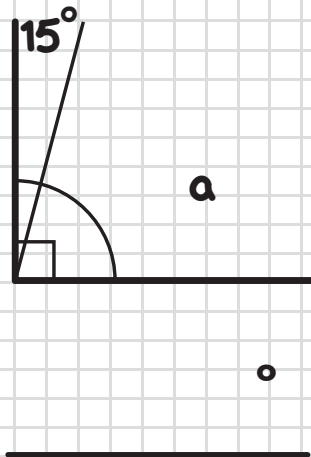
3

Tick the reflex angle



4

What is the size of angle 'a'?



7

<, > or =

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

8

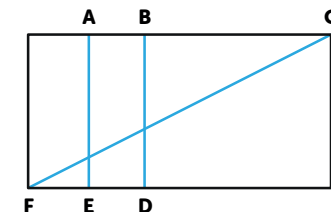
$$\frac{10}{30} + \frac{1}{3} = \frac{\quad}{3}$$

9

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

10

Tick the diagonal line.


☐
AE

☐
BD

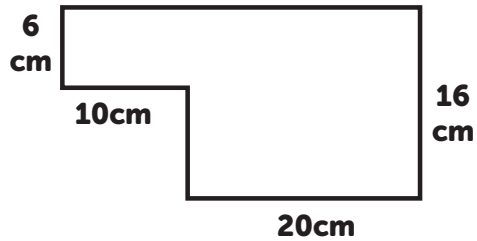
☐
CF


MY LAST SCORE?!

HAVE I BEAT THAT?!

1

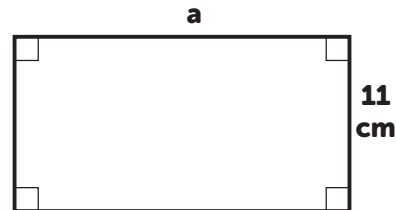
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 62cm

a =

5

Round to the nearest whole number.

2.54 →

6

Write as decimal equivalents:

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

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

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

7

<, > or =

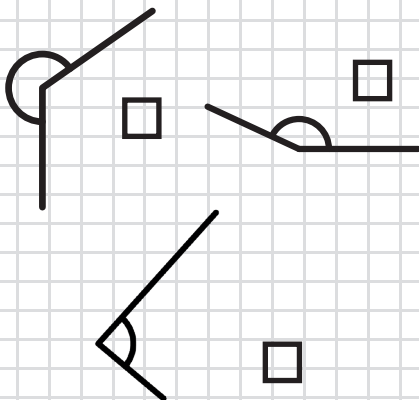
$$\frac{2}{3} \quad \square \quad \frac{5}{15}$$

8

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

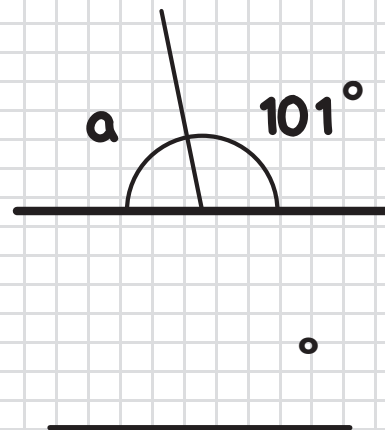
3

Tick the reflex angle



4

What is the size of angle 'a'?

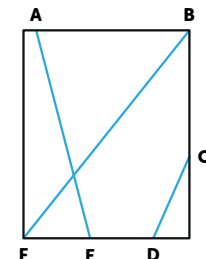


9

$$40 \div 5 = 2 \times \underline{\quad}$$

10

Tick the diagonal line.


☐ AE

☐ BF

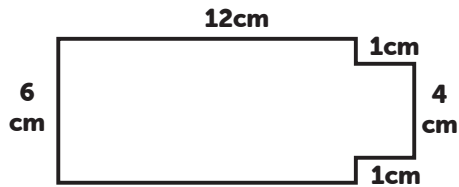
☐ CD


MY LAST SCORE?!

HAVE I BEAT THAT?!

1

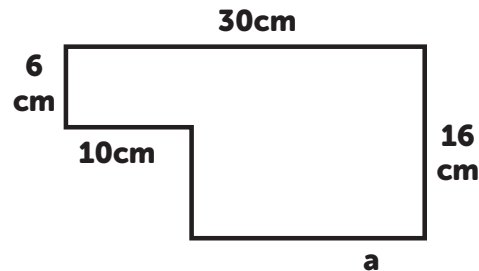
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 92cm

a =

5

Round to the nearest tenth.

9.37 →

6

Write as decimal equivalents:

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

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

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

7

<, > or =

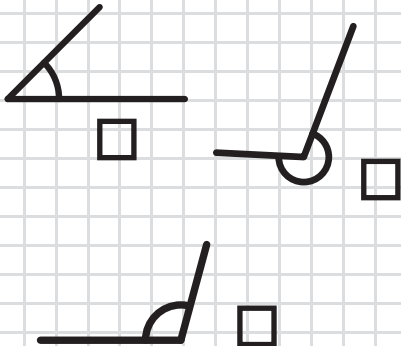
$$\frac{1}{5} \quad \square \quad \frac{4}{10}$$

8

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

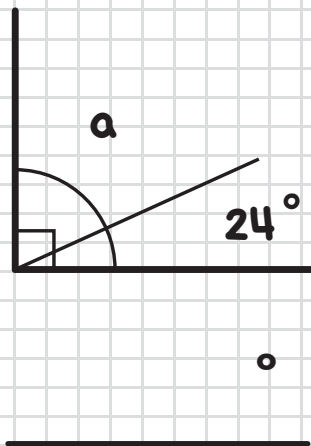
3

Tick the reflex angle



4

What is the size of angle 'a'?

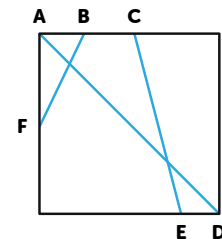


9

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

10

Tick the diagonal line.


☐ AD

☐ BF

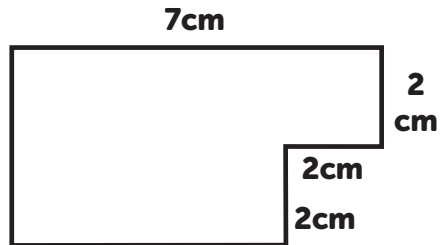
☐ CE


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 →

6

Write as decimal equivalents:

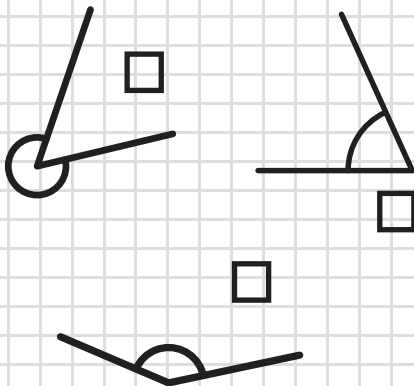
$$\frac{1}{5} =$$

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

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

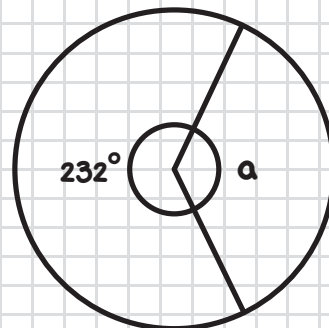
3

Tick the reflex angle



4

What is the size of angle 'a'?

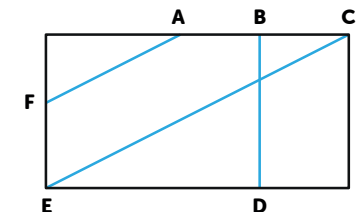


9

$$\div 5 = 40 \div 8$$

10

Tick the diagonal line.



AF



BD



CE

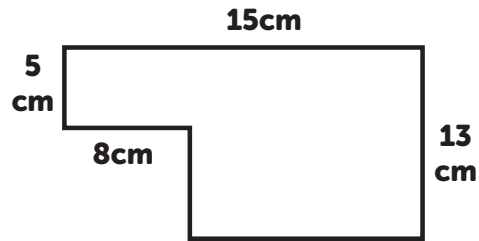


MY LAST SCORE?!

HAVE I BEAT THAT?!

1

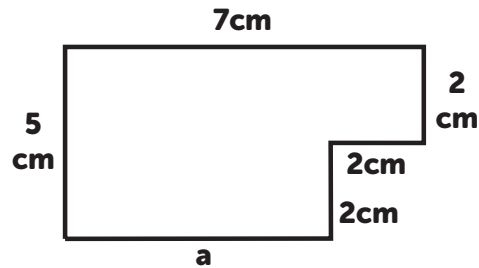
What is the perimeter?



Perimeter =

2

What is the length of side a?



Perimeter = 23cm

a =

5

Round to the nearest tenth.

3.72 →

6

Write as decimal equivalents:

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

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

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

7

<, > or =

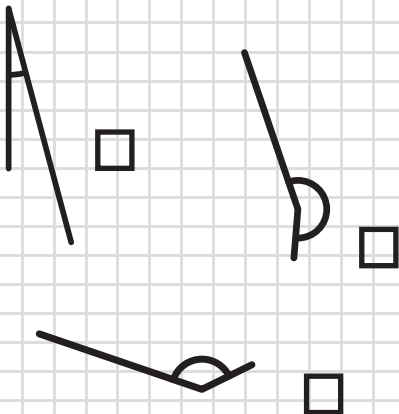
$$\frac{2}{5} \quad \square \quad \frac{10}{50}$$

8

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

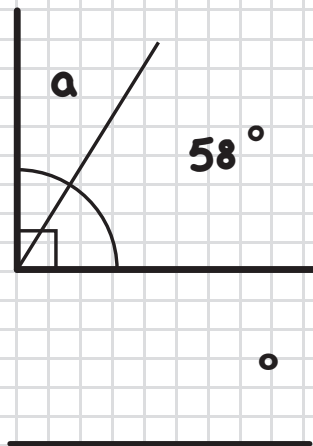
3

Tick the reflex angle



4

What is the size of angle 'a'?

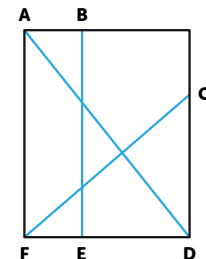


9

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

10

Tick the diagonal line.


☐ AD

☐ BE

☐ CF


MY LAST SCORE?!

HAVE I BEAT THAT?!

ANSWERS

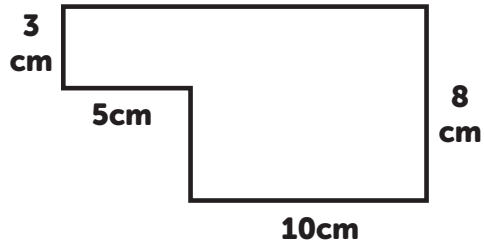
SAFE 16

SET: 1

/10

1

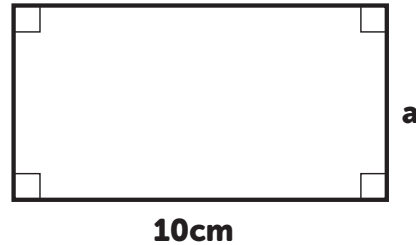
What is the perimeter?



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:

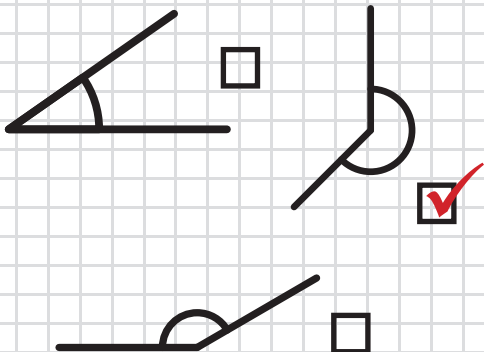
$$\frac{1}{5} = \mathbf{0.2}$$

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

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

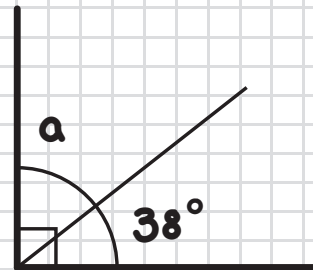
3

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

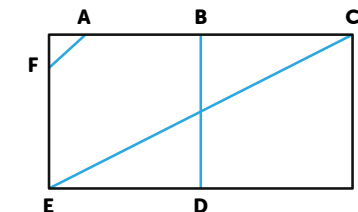
$$\frac{10}{50} + \frac{2}{5} = \frac{\mathbf{3}}{5}$$

9

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

10

Tick the diagonal line.



AF



BD



CE



MY LAST SCORE?!

HAVE I BEAT THAT?!

ANSWERS

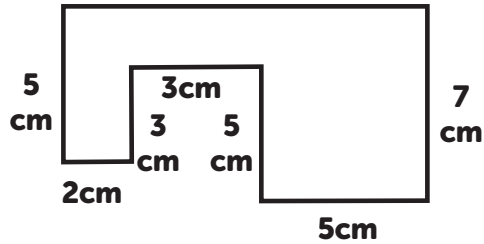
SAFE 16

SET: 2

/10

1

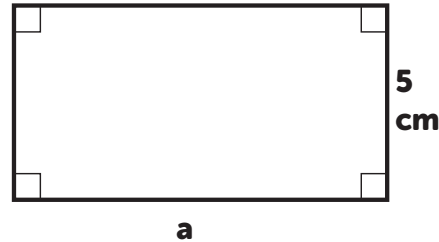
What is the perimeter?



Perimeter = **40cm**

2

What is the length of side a?



Perimeter = 30cm

a = **10cm**

5

Round to the nearest tenth.

6.12 → **6.1**

7

<, > or =

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

9

10 + 25 = 7 x 5

6

Write as decimal equivalents:

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

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

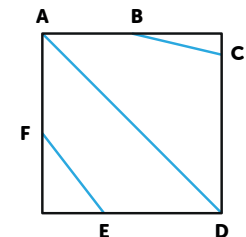
$\frac{1}{5} = \mathbf{0.2}$

8

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

10

Tick the diagonal line.



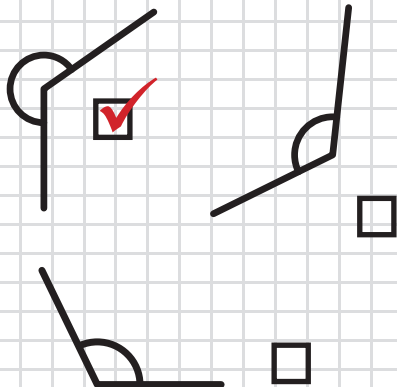
☒ AD

☐ BC

☐ EF

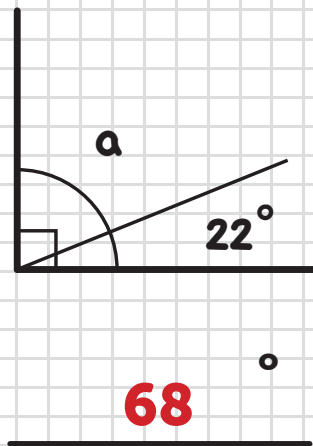
3

Tick the reflex angle



4

What is the size of angle 'a'?



68

MY LAST SCORE?!

HAVE I BEAT THAT?!



ANSWERS

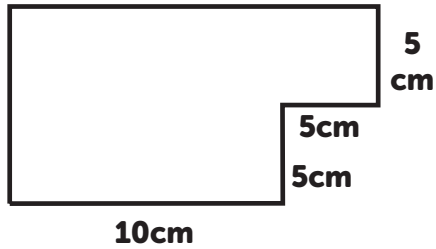
SAFE 16

SET: 3

/10

1

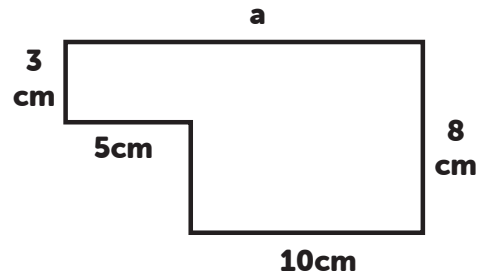
What is the perimeter?



Perimeter = **50cm**

2

What is the length of side a?



Perimeter = 46cm

a = **15cm**

5

Round to the nearest tenth.

1.65 → **1.7**

6

Write as decimal equivalents:

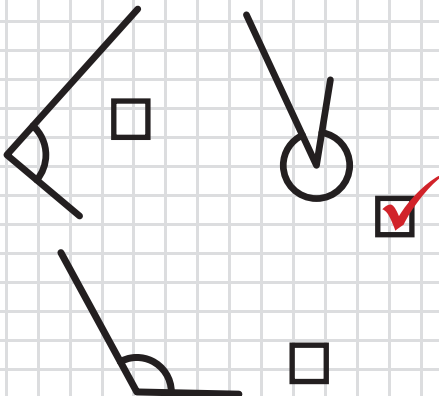
$$\frac{1}{5} = \mathbf{0.2}$$

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

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

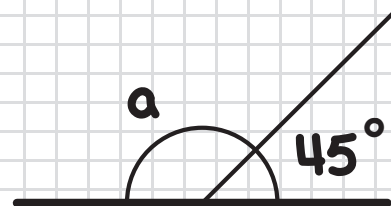
3

Tick the reflex angle



4

What is the size of angle 'a'?



135

7

<, > or =

$$\frac{2}{6} \quad \boxed{<} \quad \frac{2}{3}$$

8

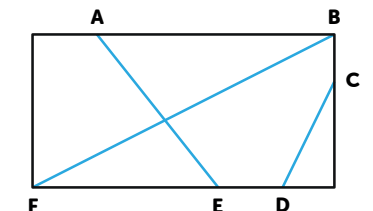
$$\frac{5}{15} + \frac{1}{3} = \frac{\mathbf{2}}{3}$$

9

$$30 - 6 = \mathbf{3} \times 8$$

10

Tick the diagonal line.



☐ AE

☒ BF

☐ CD



MY LAST SCORE?!

HAVE I BEAT THAT?!

ANSWERS

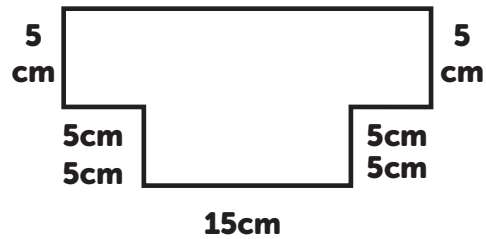
SAFE 16

SET: 4

/10

1

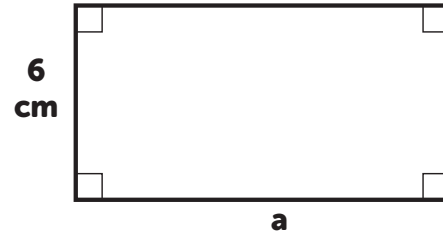
What is the perimeter?



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:

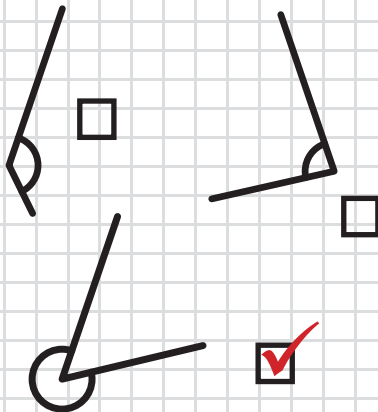
$$\frac{4}{5} = \mathbf{0.8}$$

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

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

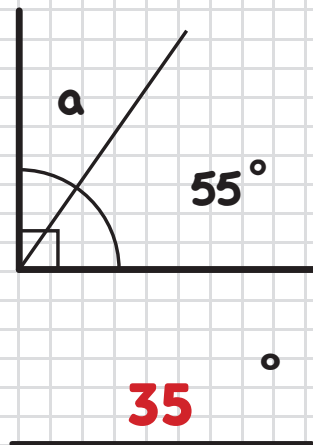
3

Tick the reflex angle



4

What is the size of angle 'a'?



7

<, > or =

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

8

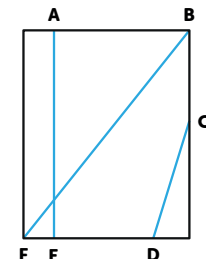
$$\frac{4}{10} + \frac{1}{2} = \frac{\mathbf{9}}{10}$$

9

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

10

Tick the diagonal line.



☐ AE

☒ BF

☐ CD



MY LAST SCORE?!

HAVE I BEAT THAT?!

ANSWERS

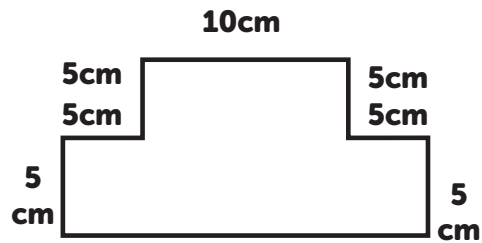
SAFE 16

SET: 5

/10

1

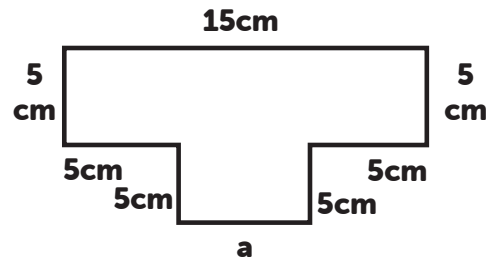
What is the perimeter?



Perimeter = **60cm**

2

What is the length of side a?



Perimeter = 50cm

a = **5cm**

5

Round to the nearest tenth.

7.35 → **7.4**

6

Write as decimal equivalents:

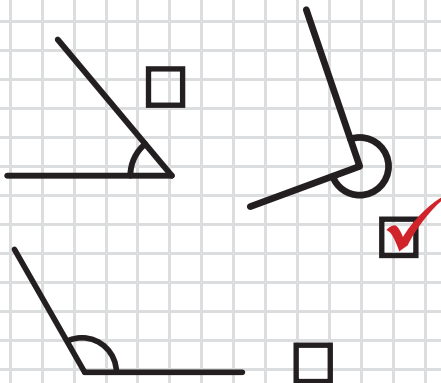
$$\frac{2}{5} = \mathbf{0.4}$$

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

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

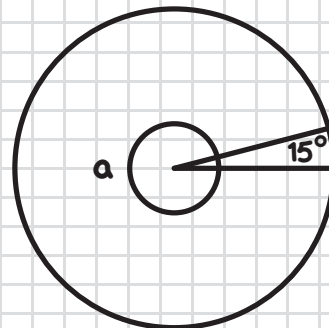
3

Tick the reflex angle



4

What is the size of angle 'a'?



345

7

<, > or =

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

8

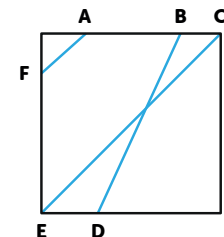
$$\frac{2}{6} + \frac{1}{3} = \frac{\mathbf{2}}{3}$$

9

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

10

Tick the diagonal line.



☐ AF

☐ BD

☒ CE



MY LAST SCORE?!

HAVE I BEAT THAT?!

ANSWERS

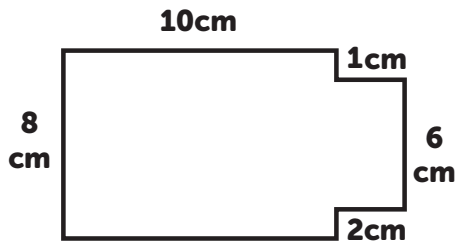
SAFE 16

SET: 6

/10

1

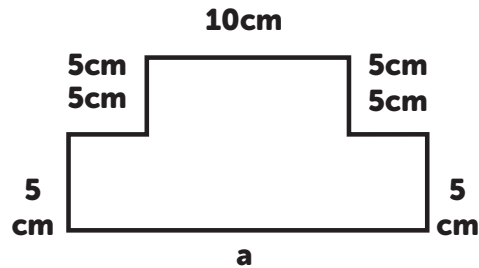
What is the perimeter?



Perimeter = **40cm**

2

What is the length of side a?



Perimeter = 60cm

a = **20cm**

5

Round to the nearest tenth.

4.71 → **4.7**

6

Write as decimal equivalents:

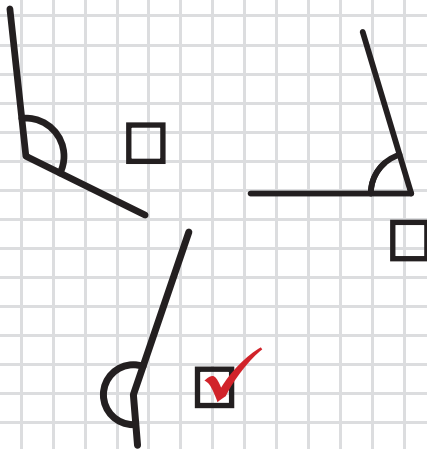
$$\frac{4}{5} = \mathbf{0.8}$$

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

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

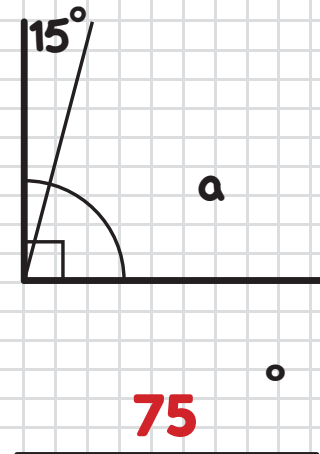
3

Tick the reflex angle



4

What is the size of angle 'a'?



7

<, > or =

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

8

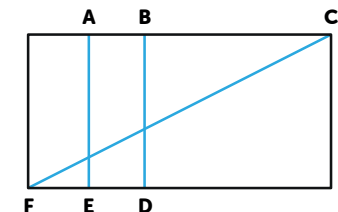
$$\frac{10}{30} + \frac{1}{3} = \frac{\mathbf{2}}{3}$$

9

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

10

Tick the diagonal line.



☐ AE

☐ BD

☒ CF



MY LAST SCORE?!

HAVE I BEAT THAT?!



ANSWERS

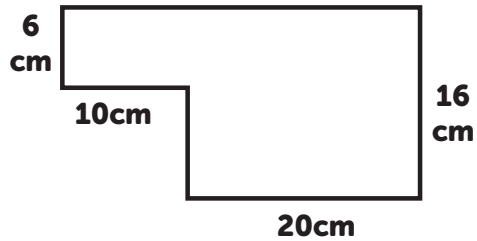
SAFE 16

SET: 7

/10

1

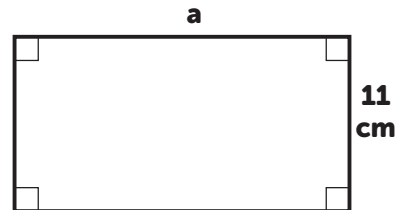
What is the perimeter?



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:

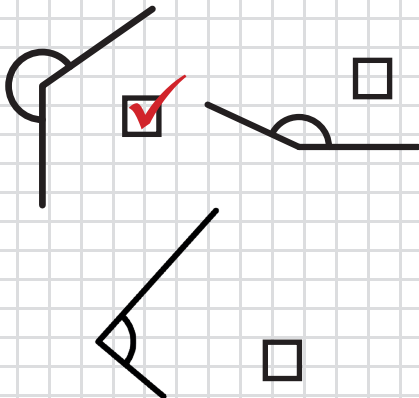
$$\frac{1}{5} = \mathbf{0.2}$$

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

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

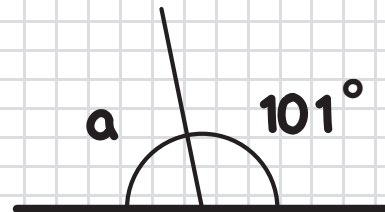
3

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

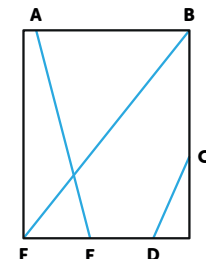
$$\frac{2}{3} - \frac{10}{30} = \frac{\mathbf{1}}{3}$$

9

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

10

Tick the diagonal line.



☐ AE

☒ BF

☐ CD



MY LAST SCORE?!

HAVE I BEAT THAT?!

ANSWERS

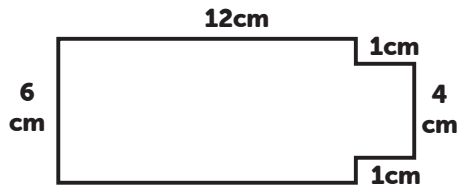
SAFE 16

SET: 8

/10

1

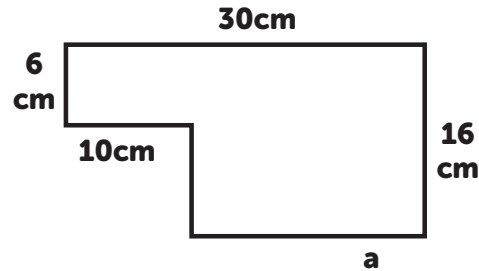
What is the perimeter?



Perimeter = **38cm**

2

What is the length of side a?



Perimeter = 92cm

a = **20cm**

5

Round to the nearest tenth.

9.37 → **9.4**

6

Write as decimal equivalents:

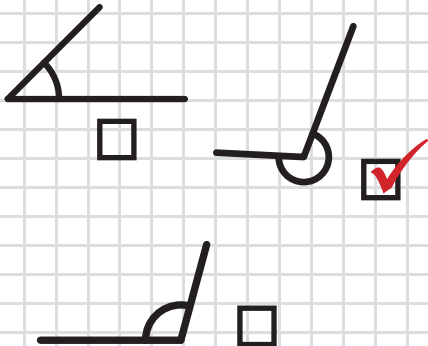
$$\frac{2}{5} = \mathbf{0.4}$$

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

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

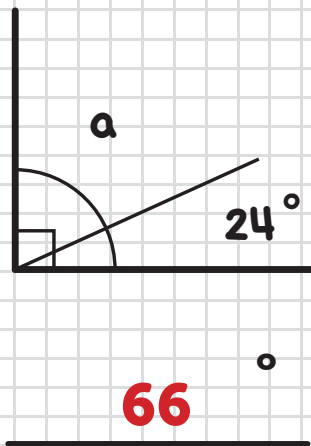
3

Tick the reflex angle



4

What is the size of angle 'a'?



7

<, > or =

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

8

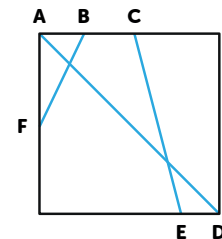
$$\frac{8}{10} - \frac{1}{5} = \frac{\mathbf{3}}{5}$$

9

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

10

Tick the diagonal line.



☒ AD

☐ BF

☐ CE



MY LAST SCORE?!

HAVE I BEAT THAT?!

ANSWERS

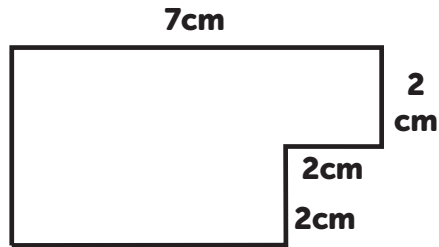
SAFE 16

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 =

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

9

25 ÷ 5 = 40 ÷ 8

6

Write as decimal equivalents:

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

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

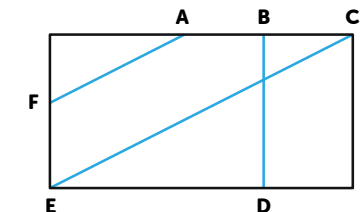
$\frac{2}{5}$ = **0.4**

8

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

10

Tick the diagonal line.



AF



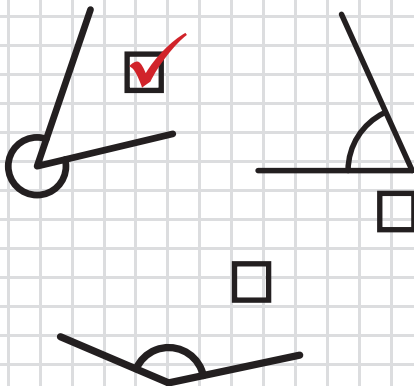
BD



CE

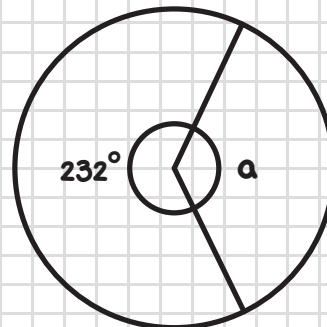
3

Tick the reflex angle



4

What is the size of angle 'a'?



128

MY LAST SCORE?!

HAVE I BEAT THAT?!



ANSWERS

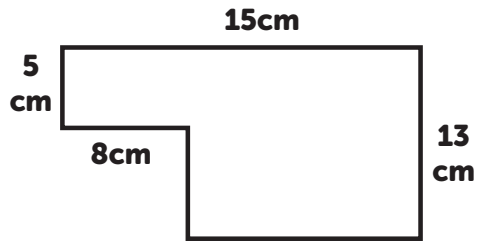
SAFE 16

SET: 10

/10

1

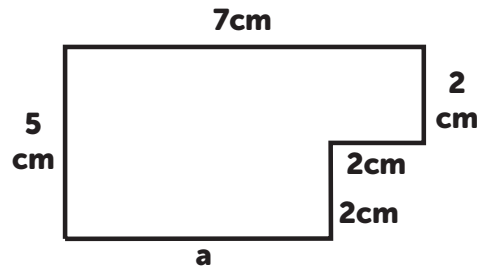
What is the perimeter?



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:

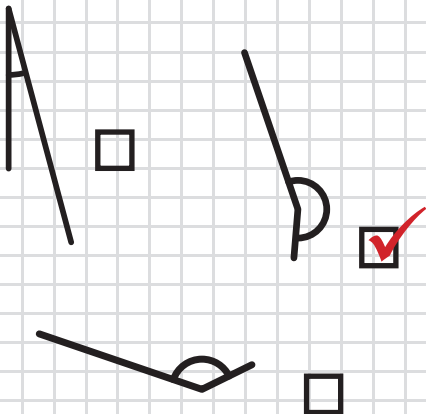
$$\frac{2}{5} = \mathbf{0.4}$$

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

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

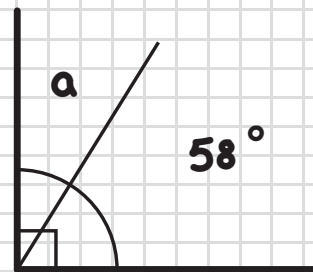
3

Tick the reflex angle



4

What is the size of angle 'a'?



32

7

<, > or =

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

8

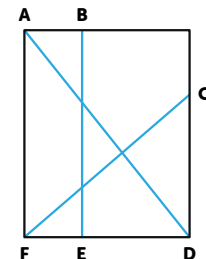
$$\frac{1}{2} + \frac{2}{10} = \frac{7}{10}$$

9

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

10

Tick the diagonal line.



☒ AD

☐ BE

☐ CF



MY LAST SCORE?!

HAVE I BEAT THAT?!