

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	Dangerous Maths: Algebra	10	I can use trial and improvement to find two missing numbers

NAME:

CLASS:

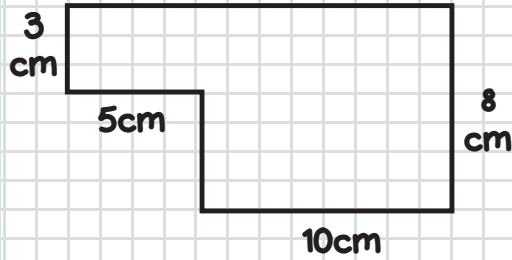
DATE:

SAFE 16

WK: 1

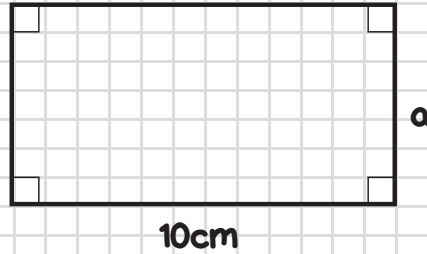
/10

1 What is the perimeter?



Perimeter =

2 What is the length of side a?



Perimeter = 32cm

a =

3 Round to the nearest whole number.

4.73 →

6 Write as decimal equivalents:

$\frac{1}{5} =$

$\frac{2}{5} =$

$\frac{4}{5} =$

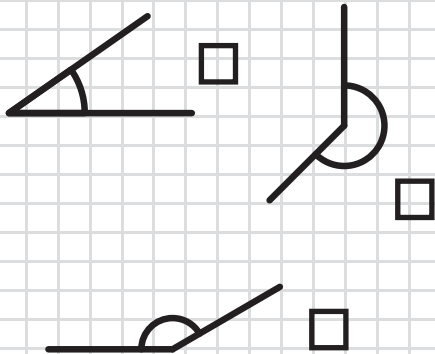
7 <, > or =

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

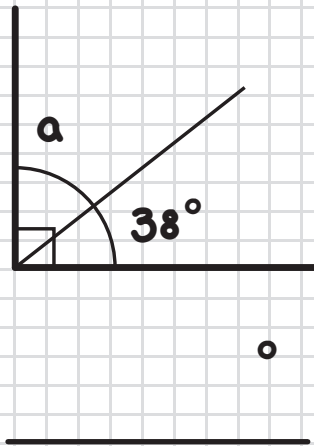
8

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

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



9

$73 - 45 = \quad \times 7$

10

$x - 5 = 20 - y$

x =

y =

MY LAST SCORE?!

HAVE I BEAT THAT?!



NAME:

CLASS:

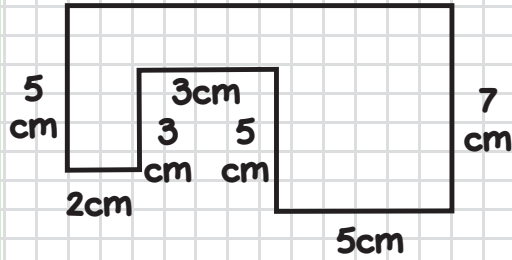
DATE:

SAFE 16

WK: 2

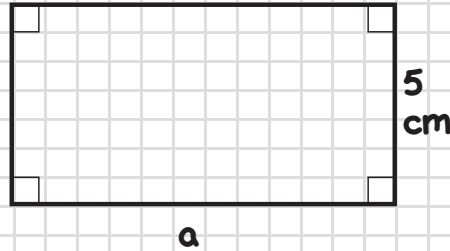
/10

1 What is the perimeter?



Perimeter =

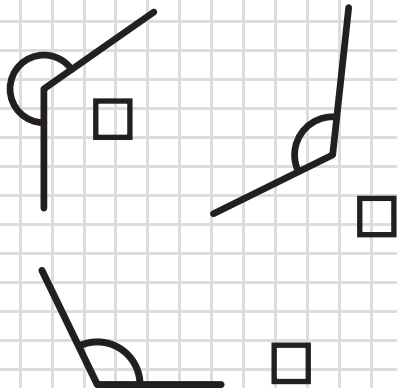
2 What is the length of side a?



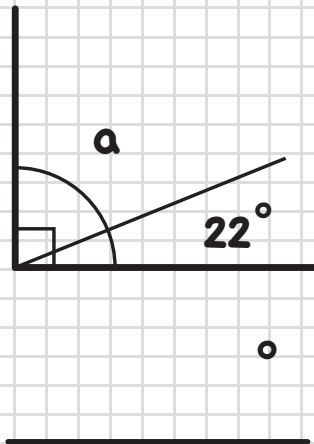
Perimeter = 30cm

a =

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



5 Round to the nearest tenth.

6.12 →

7 <, > or =

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

9 $10 + 25 = \underline{\hspace{2cm}} \times 5$

6 Write as decimal equivalents:

$\frac{2}{5} =$

$\frac{4}{5} =$

$\frac{1}{5} =$

8 $\frac{4}{10} - \frac{1}{5} = \frac{\hspace{1cm}}{5}$

10 $x - 3 = 10 - y$
 $x =$
 $y =$

MY LAST SCORE?!

HAVE I BEAT THAT?!



NAME:

CLASS:

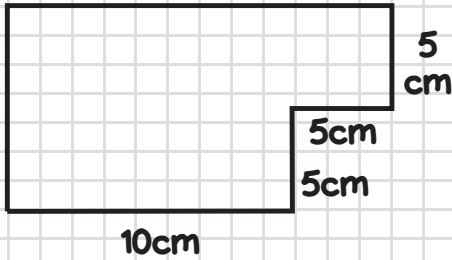
DATE:

SAFE 16

WK: 3

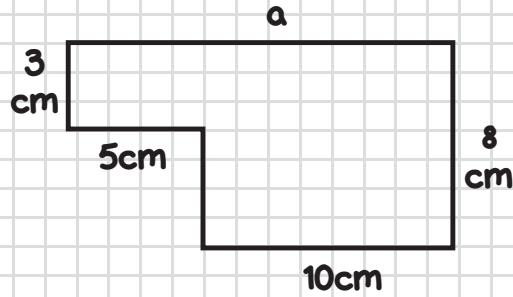
/10

1 What is the perimeter?



Perimeter =

2 What is the length of side a?



Perimeter = 41cm

a =

3 Round to the nearest tenth.

1.65 →

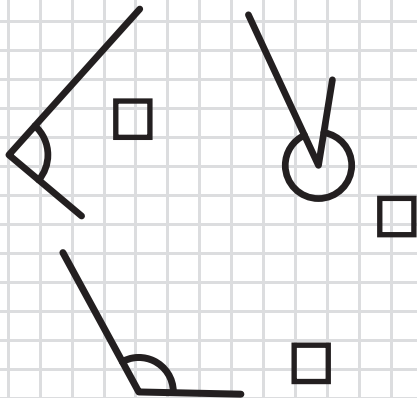
6 Write as decimal equivalents:

$\frac{1}{5} =$

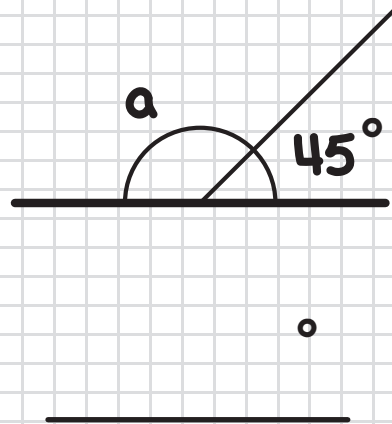
$\frac{4}{5} =$

$\frac{2}{5} =$

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



7 <, > or =

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

8

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

9

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

10

$x + 2 = 15 + y$

x =

y =



MY LAST SCORE?!

HAVE I BEAT THAT?!



NAME:

CLASS:

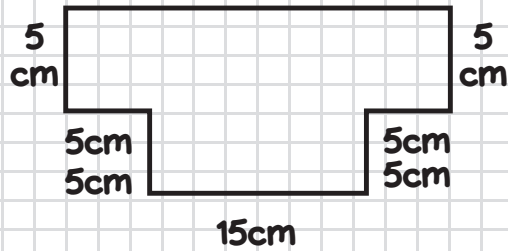
DATE:

SAFE 16

WK:4

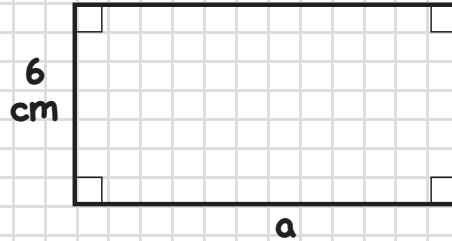
/10

1 What is the perimeter?



Perimeter =

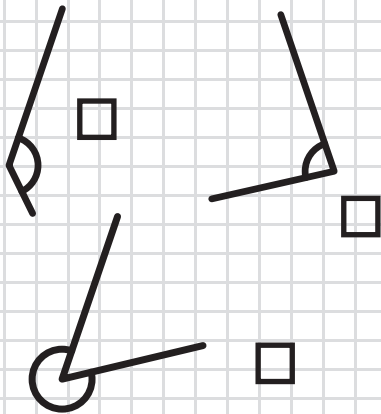
2 What is the length of side a?



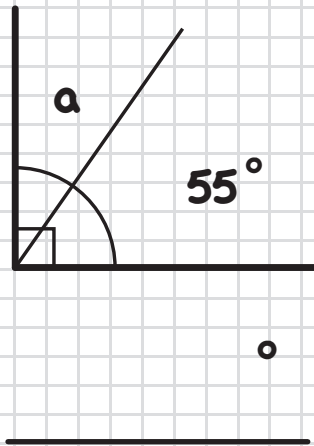
Perimeter = 42cm

a =

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



5 Round to the nearest whole number.

3.14 →

7 <, > or =

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

9

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

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

$x + 9 = y + 6$

x =

y =

MY LAST SCORE?!

HAVE I BEAT THAT?!



NAME:

CLASS:

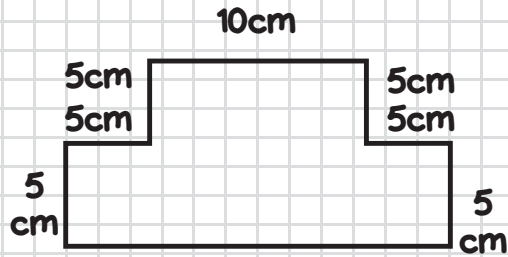
DATE:

SAFE 16

WK: 5

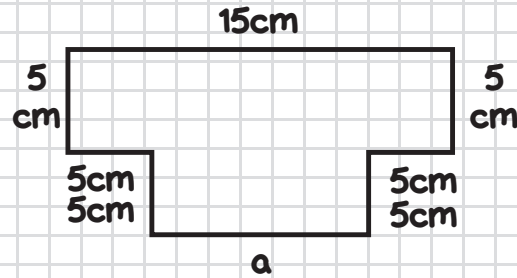
/10

1 What is the perimeter?



Perimeter =

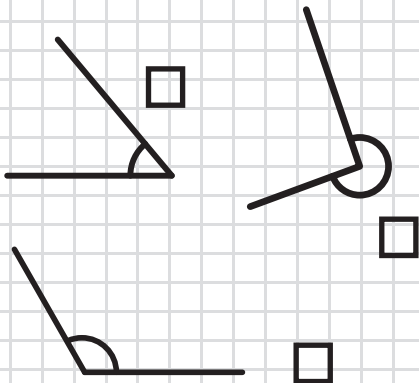
2 What is the length of side a?



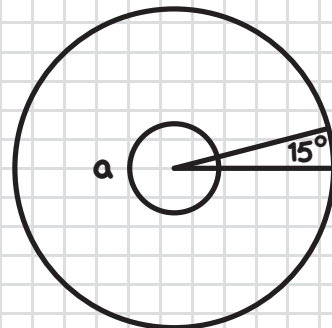
Perimeter = 50cm

a =

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



5 Round to the nearest tenth.

7.35 →

7 <, > or =

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

9

$22 - 2 =$ _____ $+ 11$

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

$x \times 3 = 9 + y$

$x =$

$y =$



MY LAST SCORE?!

HAVE I BEAT THAT?!



NAME:

CLASS:

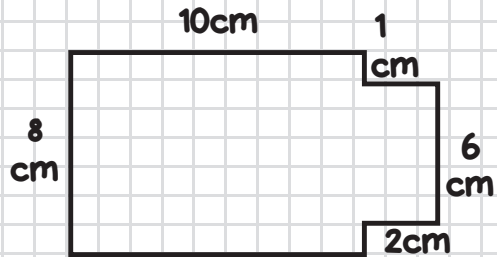
DATE:

SAFE 16

WK: 6

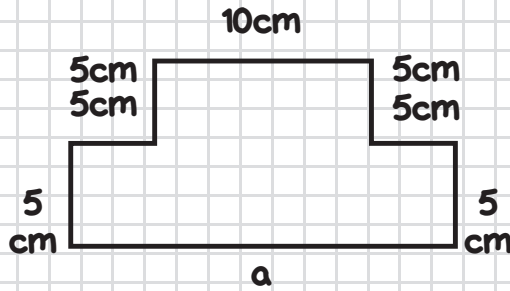
/10

1 What is the perimeter?



Perimeter =

2 What is the length of side a?



Perimeter = 60cm

a =

3 Round to the nearest tenth.

4.71 →

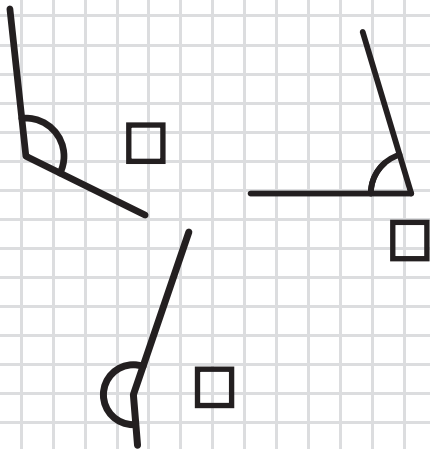
6 Write as decimal equivalents:

$\frac{4}{5} =$

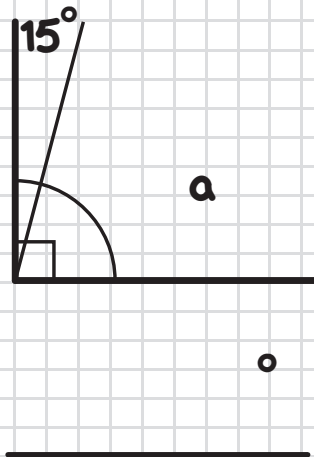
$\frac{2}{5} =$

$\frac{1}{5} =$

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



7 <, > or =

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

8

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

9

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

10

$x + 20 = y - 6$

$x =$

$y =$

MY LAST SCORE?!

HAVE I BEAT THAT?!



NAME:

CLASS:

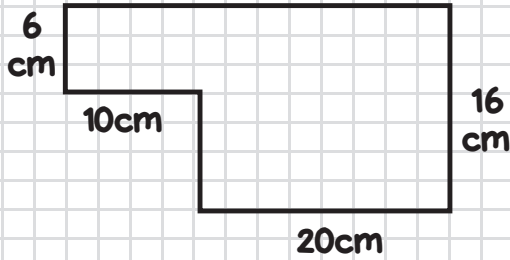
DATE:

SAFE 16

WK: 7

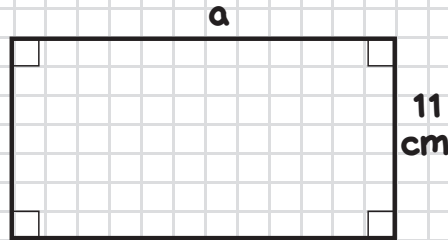
/10

1 What is the perimeter?



Perimeter =

2 What is the length of side a?



Perimeter = 62cm

a =

3 Round to the nearest whole number.

2.54 →

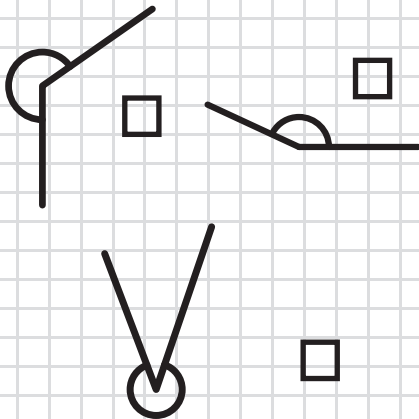
3 Write as decimal equivalents:

$\frac{1}{5} =$

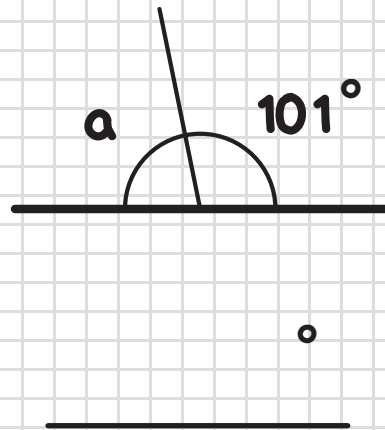
$\frac{4}{5} =$

$\frac{2}{5} =$

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



7 <, > or =

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

8

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

9

$40 \div 5 = 2x$ _____

10

$4x - 6 = y$

x =

y =

MY LAST SCORE?!

HAVE I BEAT THAT?!



NAME:

CLASS:

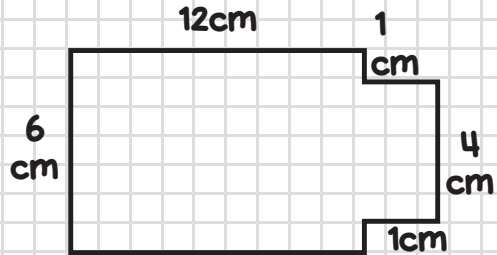
DATE:

SAFE 16

WK: 8

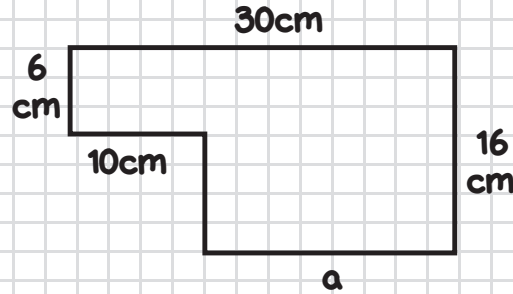
/10

1 What is the perimeter?



Perimeter =

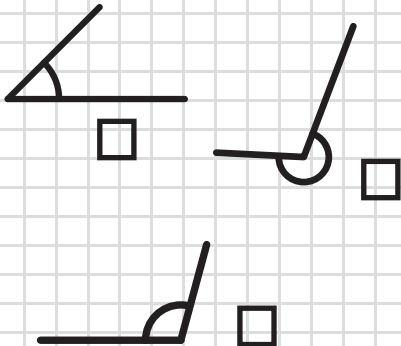
2 What is the length of side a?



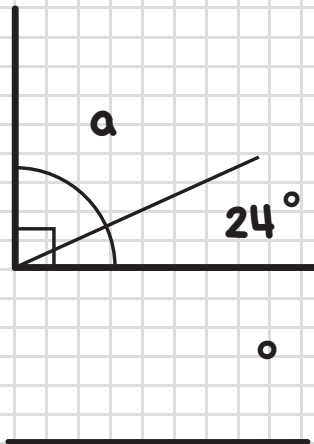
Perimeter = 82cm

a =

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



5 Round to the nearest tenth.

9.37 →

7 <, > or =

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

9

$\underline{\hspace{2cm}} \times 5 = 27 + 8$

6 Write as decimal equivalents:

$\frac{2}{5} =$

$\frac{1}{5} =$

$\frac{4}{5} =$

8

$\frac{8}{10} - \frac{1}{5} = \frac{\hspace{1cm}}{5}$

10

$24 \div x = y \times 2$

x =

y =

MY LAST SCORE?!

HAVE I BEAT THAT?!



NAME:

CLASS:

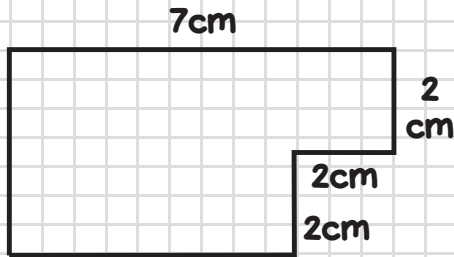
DATE:

SAFE 16

WK: 9

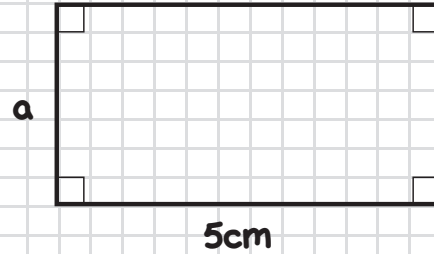
/10

1 What is the perimeter?



Perimeter =

2 What is the length of side a?



Perimeter = 16cm

a =

3 Round to the nearest tenth.

1.74 →

7 <, > or =

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

9

$\div 5 = 40 \div 8$

6 Write as decimal equivalents:

$\frac{1}{5} =$

$\frac{4}{5} =$

$\frac{2}{5} =$

8

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

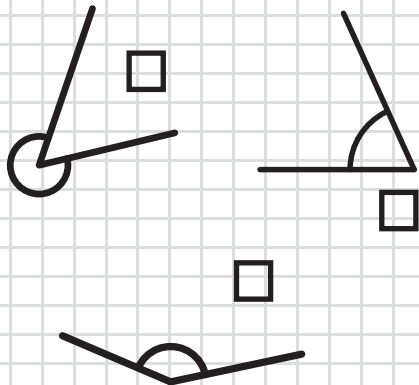
10

$4x + 12 = y + 12$

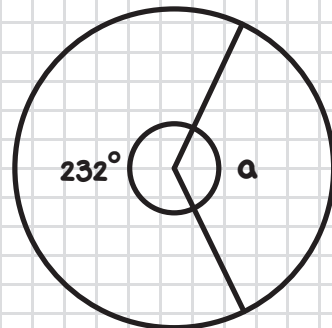
x =

y =

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



MY LAST SCORE?!

HAVE I BEAT THAT?!



NAME:

CLASS:

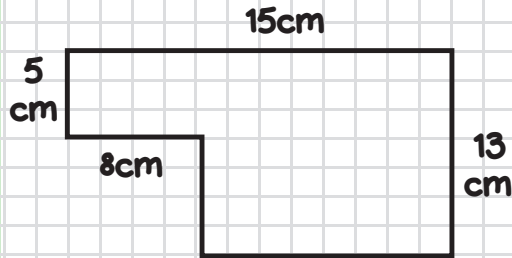
DATE:

SAFE 16

WK: 10

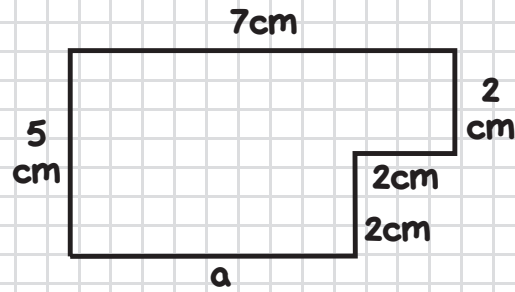
/10

1 What is the perimeter?



Perimeter =

2 What is the length of side a?



Perimeter = 23cm

a =

3 Round to the nearest tenth.

3.72 →

6 Write as decimal equivalents:

$\frac{2}{5} =$

$\frac{4}{5} =$

$\frac{1}{5} =$

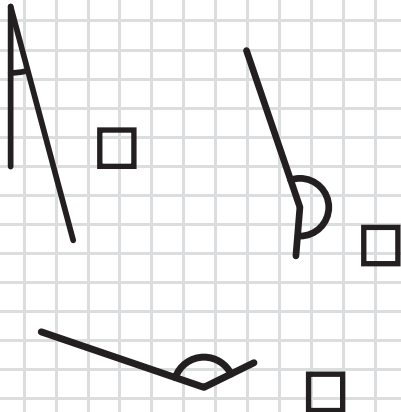
7 <, > or =

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

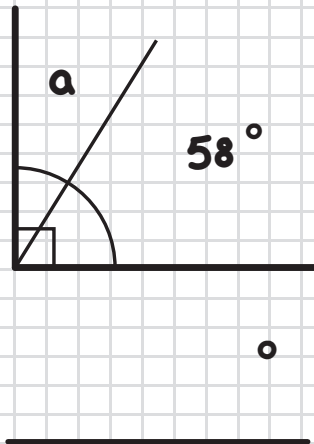
8

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

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



9

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

10

$3 \times x = 7 + y$

x =

y =

MY LAST SCORE?!

HAVE I BEAT THAT?!



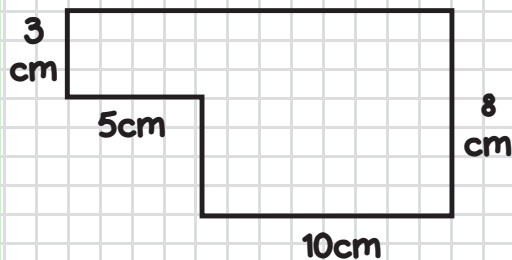
ANSWERS

SAFE 16

WK: 1

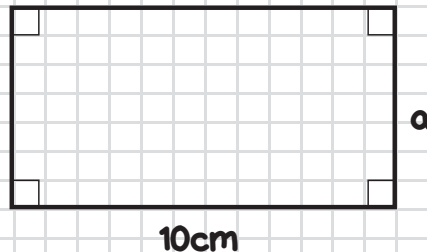
/10

1 What is the perimeter?



Perimeter = **46cm**

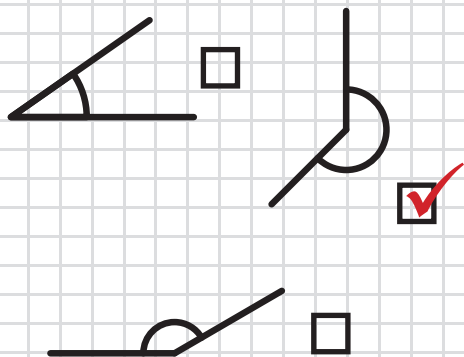
2 What is the length of side a?



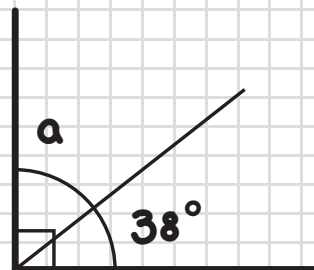
Perimeter = 32cm

a = **6cm**

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



52

5 Round to the nearest whole number.

4.73 → **5**

6 Write as decimal equivalents:

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

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

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

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

$$x - 5 = 20 - y$$

$$x = \mathbf{20}$$

$$y = \mathbf{5}$$

Any pair of values that add up to 25 are correct. ($x + y = 25$)

MY LAST SCORE?!

HAVE I BEAT THAT?!



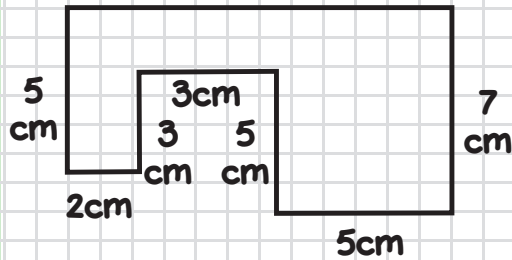
ANSWERS

SAFE 16

WK: 2

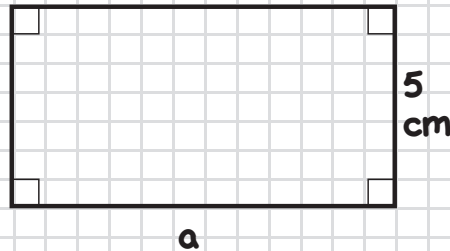
/10

1 What is the perimeter?



Perimeter = **40cm**

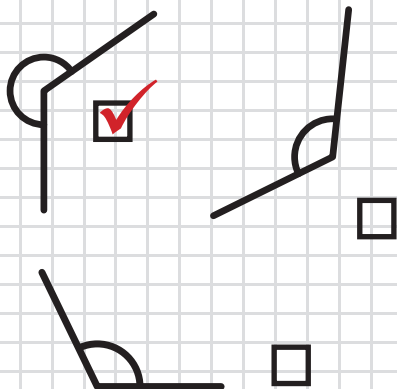
2 What is the length of side a?



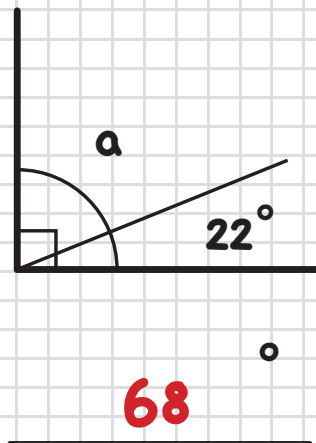
Perimeter = 30cm

a = **10cm**

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



68

5 Round to the nearest tenth.

6.12 → **6.1**

7 <, > or =

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

6 Write as decimal equivalents:

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

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

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

8

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

9

$10 + 25 =$ **7** $\times 5$

10

$x - 3 = 10 - y$

$x =$ **10**

$y =$ **3**

Any pair of values that add up to 13 are correct. ($x + y = 13$)



MY LAST SCORE?!

HAVE I BEAT THAT?!

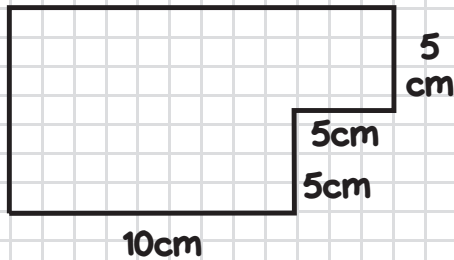
ANSWERS

SAFE 16

WK: 3

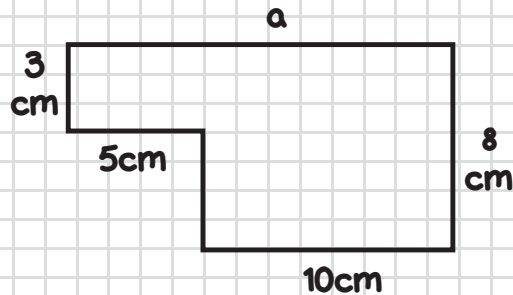
/10

1 What is the perimeter?



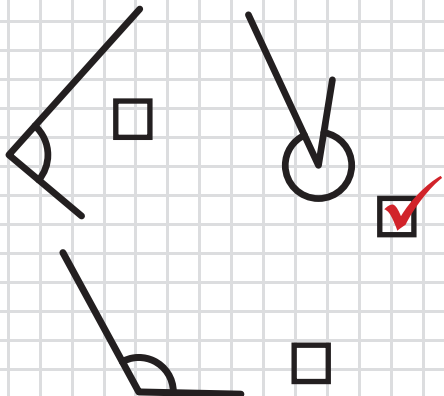
Perimeter = **50cm**

2 What is the length of side a?

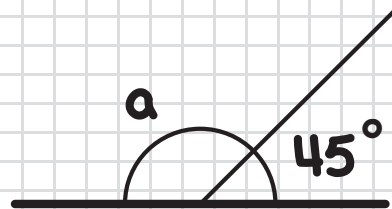


Perimeter = 41cm
a = **15cm**

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



135 °

5 Round to the nearest tenth.

1.65 → **1.7**

7 <, > or =

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

6 Write as decimal equivalents:

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

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

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

8

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

9

30 - 6 = **3** x 8

10

$x + 2 = 15 + y$

$x =$ **15**

$y =$ **2**

Any pair of values where y is 13 less than x are correct. ($y = x - 13$)

MY LAST SCORE?!

HAVE I BEAT THAT?!



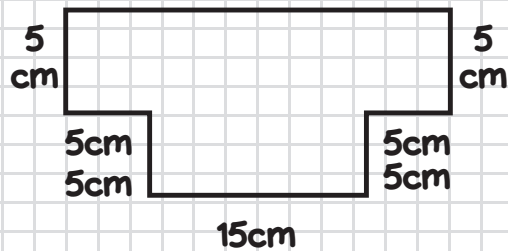
ANSWERS

SAFE 16

WK:4

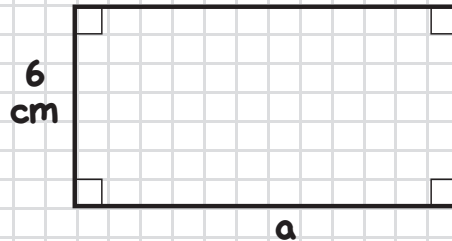
/10

1 What is the perimeter?



Perimeter = **70cm**

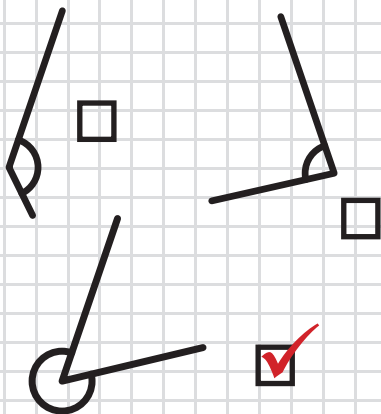
2 What is the length of side a?



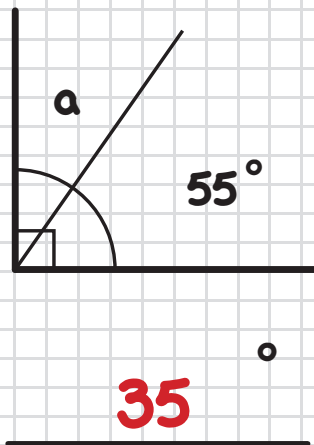
Perimeter = 42cm

a = **15cm**

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



35

5 Round to the nearest whole number.

3.14 → **3**

6 Write as decimal equivalents:

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

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

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

7 <, > or =

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

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

9

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

$$\mathbf{10} \quad x + 9 = y + 6$$

$$x = \mathbf{6}$$

$$y = \mathbf{9}$$

Any pair of values where y is 3 more than x are correct. ($y = x + 3$)



MY LAST SCORE?!

HAVE I BEAT THAT?!



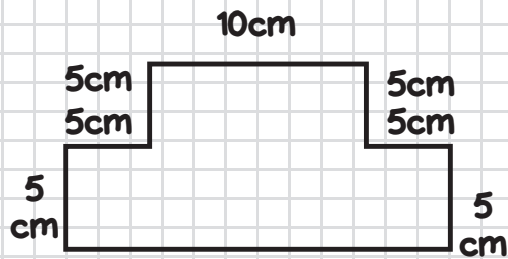
ANSWERS

SAFE 16

WK: 5

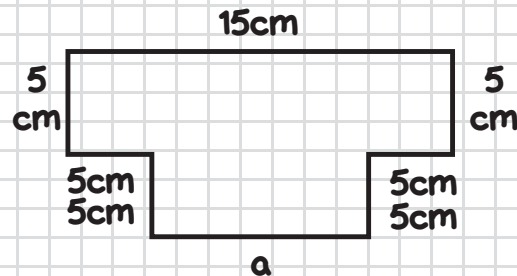
/10

1 What is the perimeter?



Perimeter = **60cm**

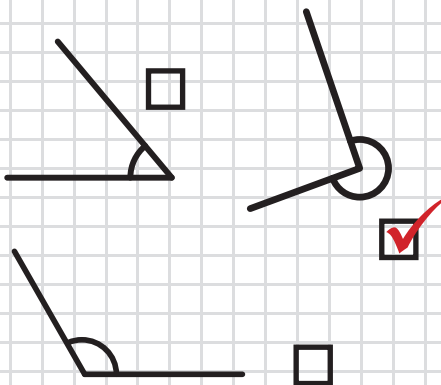
2 What is the length of side a?



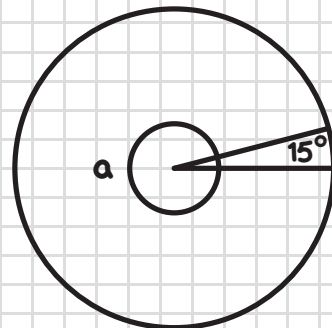
Perimeter = 50cm

a = **5cm**

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



345

5 Round to the nearest tenth.

7.35 → **7.4**

6 Write as decimal equivalents:

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

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

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

7 <, > or =

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

8

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

9

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

10

$$x \times 3 = 9 + y$$

$$x = \mathbf{10}$$

$$y = \mathbf{21}$$

Any pair of values where $x = (y \div 3) + 3$



MY LAST SCORE?!

HAVE I BEAT THAT?!



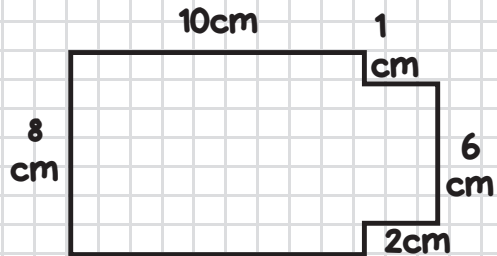
ANSWERS

SAFE 16

WK: 6

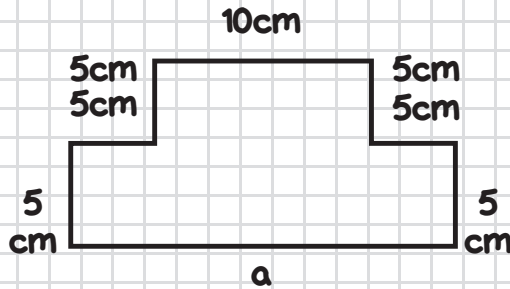
/10

1 What is the perimeter?



Perimeter = **40cm**

2 What is the length of side a?



Perimeter = 60cm

a = **20cm**

3 Round to the nearest tenth.

4.71 → **4.7**

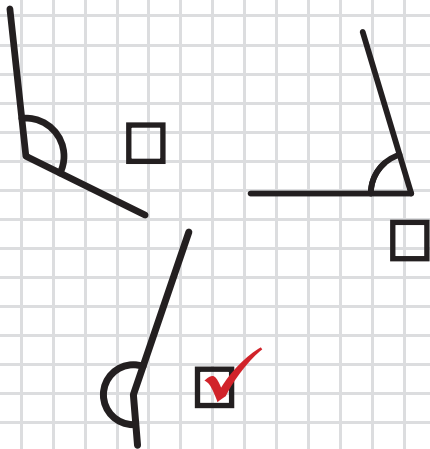
6 Write as decimal equivalents:

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

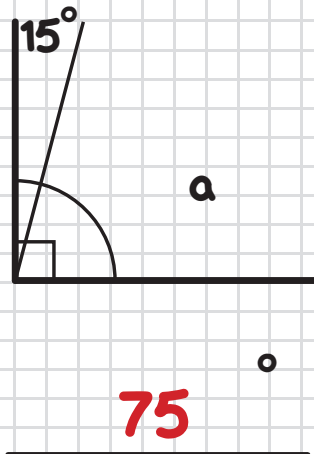
$$\frac{2}{5} = \mathbf{0.4}$$

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

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



7 <, > or =

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

8

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

9

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

10

$$x + 20 = y - 6$$

$$x = \mathbf{2}$$

$$y = \mathbf{28}$$

Any pair of values where y is 26 more than x are correct. ($y = x + 26$)



MY LAST SCORE?!

HAVE I BEAT THAT?!



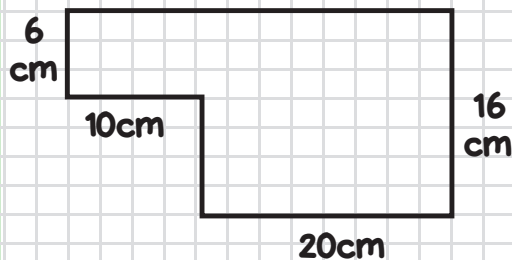
ANSWERS

SAFE 16

WK: 7

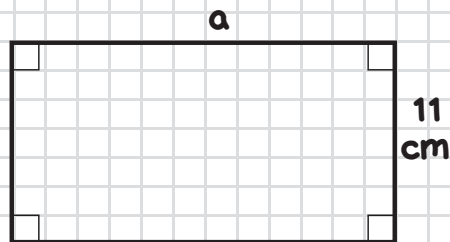
/10

1 What is the perimeter?



Perimeter = **82cm**

2 What is the length of side a?



Perimeter = 62cm

a = **20cm**

3 Round to the nearest whole number.

2.54 → **3**

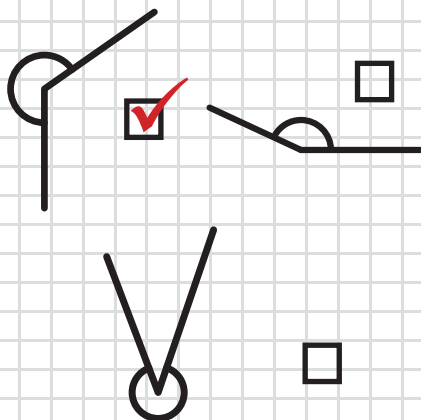
3 Write as decimal equivalents:

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

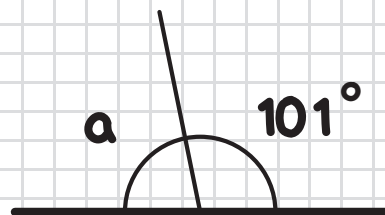
$$\frac{4}{5} = \mathbf{0.8}$$

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

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



79

7 <, > or =

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

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

9

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

$$10 \quad 4x = y - 6$$

$$x = \mathbf{6}$$

$$y = \mathbf{30}$$

Any pair of values where
 $x = (y \div 4) - 1.5$

MY LAST SCORE?!

HAVE I BEAT THAT?!



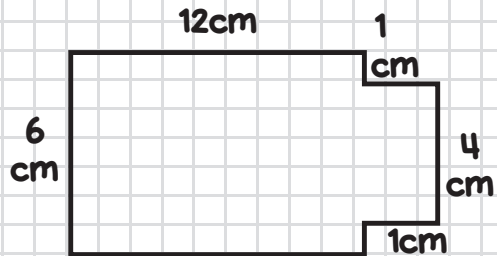
ANSWERS

SAFE 16

WK: 8

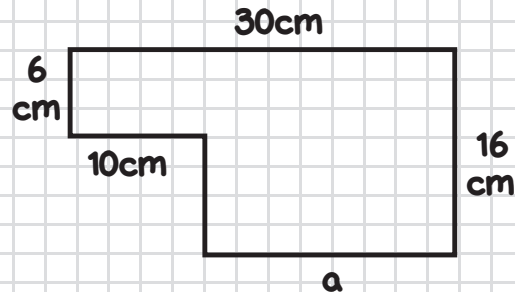
/10

1 What is the perimeter?



Perimeter = **38cm**

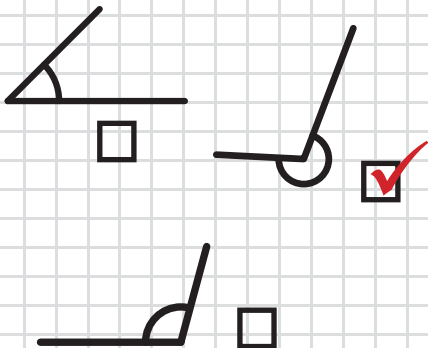
2 What is the length of side a?



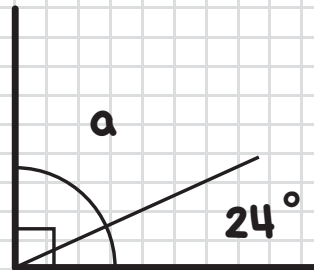
Perimeter = 82cm

a = **20cm**

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



66

5 Round to the nearest tenth.

9.37 → **9.4**

7 <, > or =

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

6 Write as decimal equivalents:

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

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

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

8

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

9

7 x 5 = 27 + 8

10

$24 \div x = y \times 2$

x = **2**

y = **6**

Any pair of values where x times y is 12 are correct. (x times y = 12)



MY LAST SCORE?!

HAVE I BEAT THAT?!



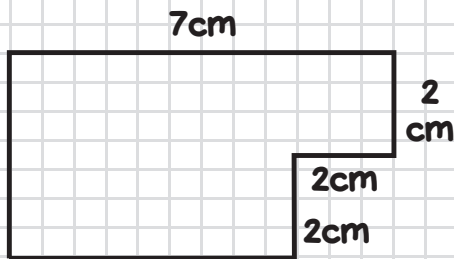
ANSWERS

SAFE 16

WK: 9

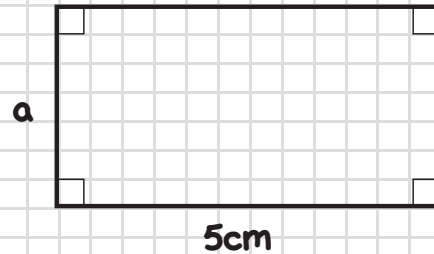
/10

1 What is the perimeter?



Perimeter = **22cm**

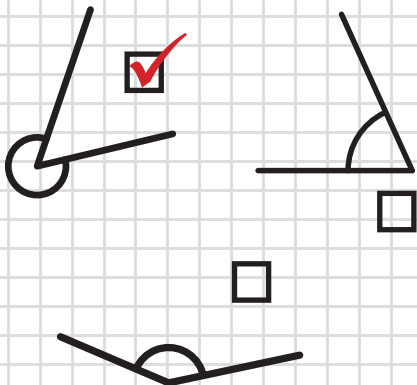
2 What is the length of side a?



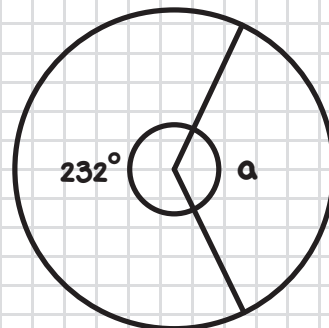
Perimeter = 16cm

a = **3cm**

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



128

5 Round to the nearest tenth.

1.74 → **1.7**

7 <, > or =

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

6 Write as decimal equivalents:

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

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

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

8

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

9

25 ÷ 5 = 40 ÷ 8

10

$4x = y + 12$

x = **5**

y = **8**

Any pair of values where x = (y + 12) ÷ 4



MY LAST SCORE?!

HAVE I BEAT THAT?!

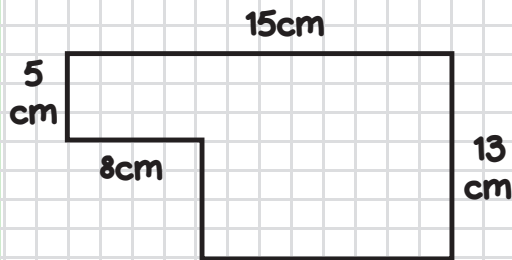
ANSWERS

SAFE 16

WK: 10

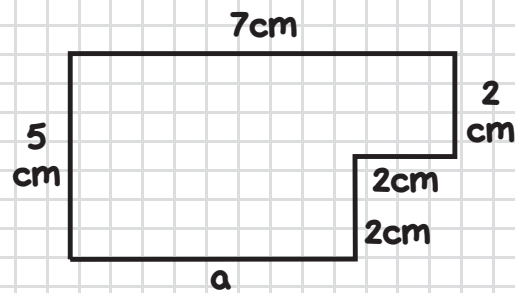
/10

1 What is the perimeter?



Perimeter = **56cm**

2 What is the length of side a?



Perimeter = 23cm

a = **5cm**

3 Round to the nearest tenth.

3.72 → **3.7**

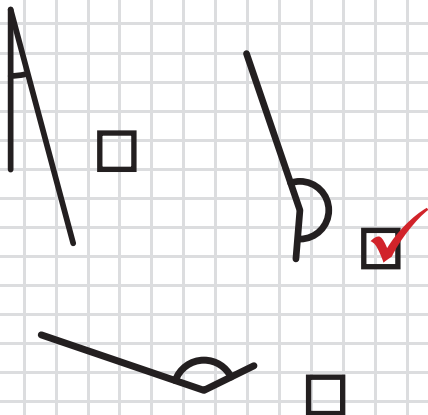
6 Write as decimal equivalents:

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

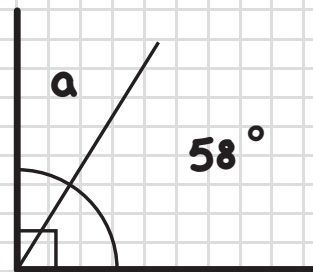
$$\frac{4}{5} = \mathbf{0.8}$$

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

3 Which of these angles is a 'reflex' angle?



4 What is the size of angle 'a'?



32

7 <, > or =

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

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

9

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

$$10 \quad \mathbf{3x} \quad \mathbf{x} = 7 + y$$

$$x = \mathbf{5}$$

$$y = \mathbf{8}$$

Any pair of values where y = (3 times x) - 7

MY LAST SCORE?!

HAVE I BEAT THAT?!

