

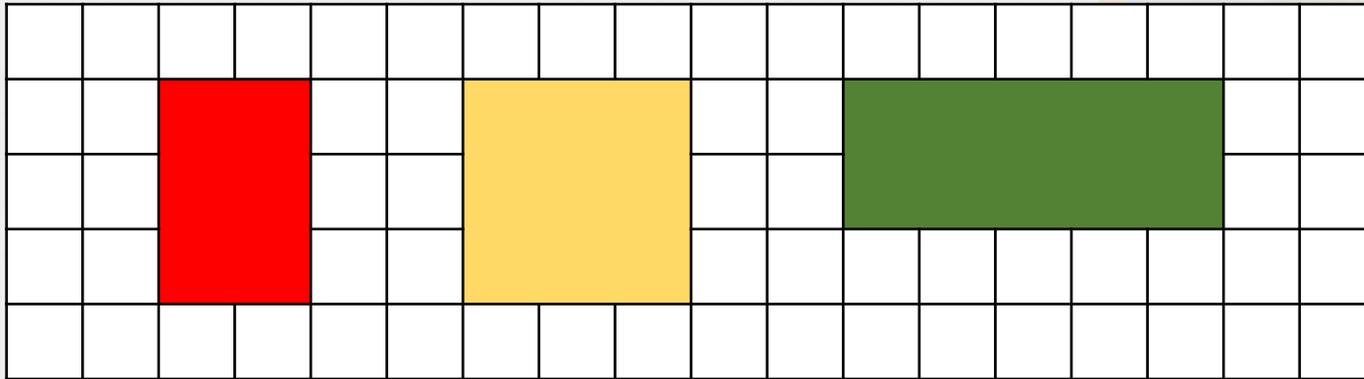
Year 5 – Monday 20th April 2020

Measuring Perimeter (revision)

You will need a ruler

Introduction

Match the shape to its perimeter.



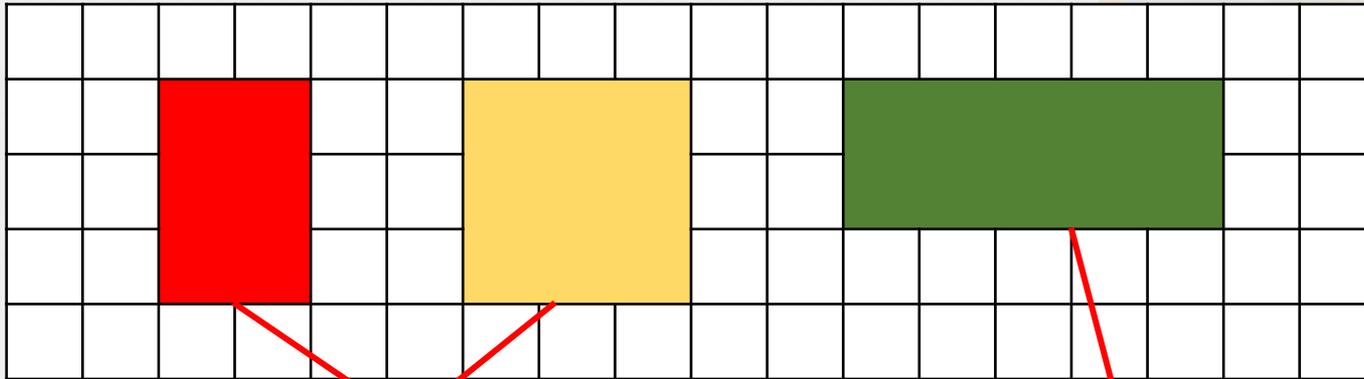
12cm

10cm

14cm

Introduction

Match the shape to its perimeter.



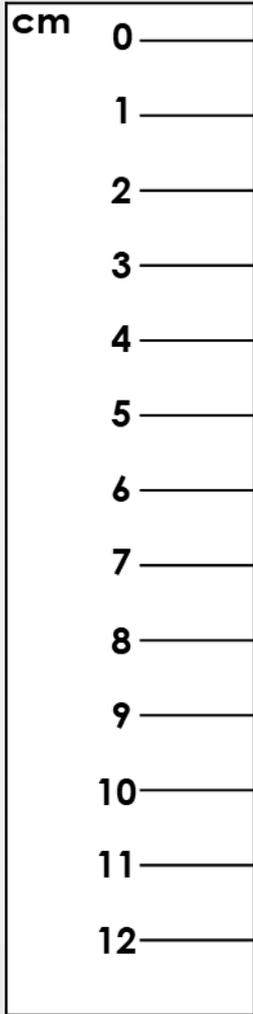
12cm

10cm

14cm

Varied Fluency 1

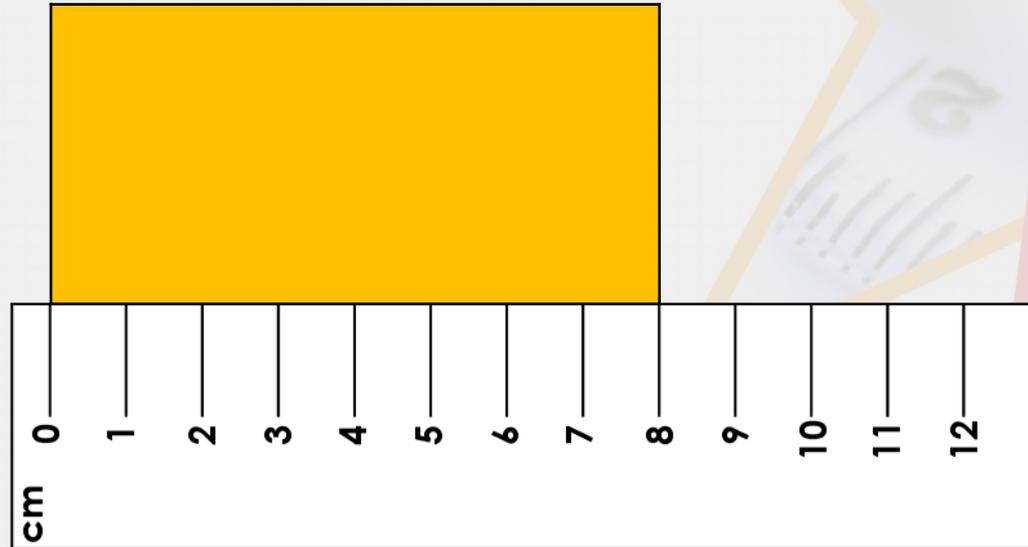
Find the perimeter of this shape.



Varied Fluency 1

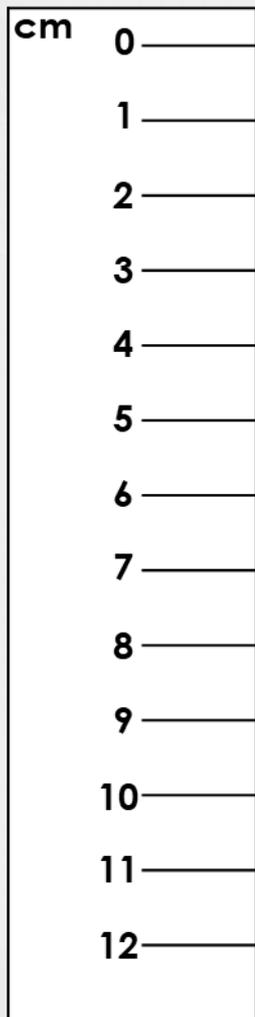
Find the perimeter of this shape.

Measure each side with a ruler.



Varied Fluency 1

Find the perimeter of this shape.

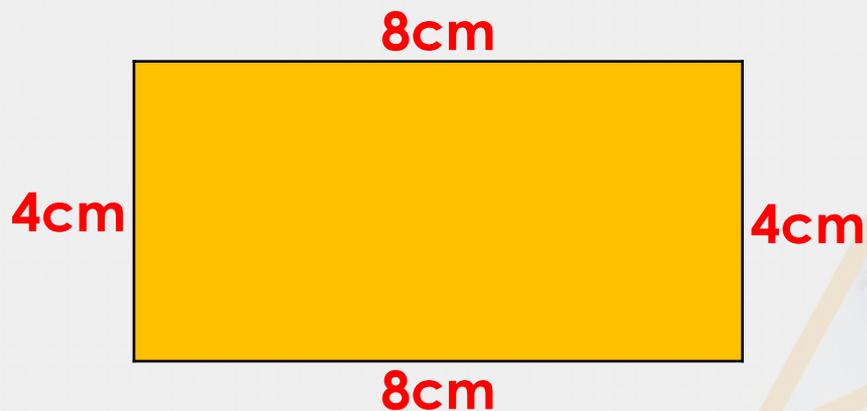


8cm

The side measured was 8cm.
Now measure any other sides needed
using the same method.

Varied Fluency 1

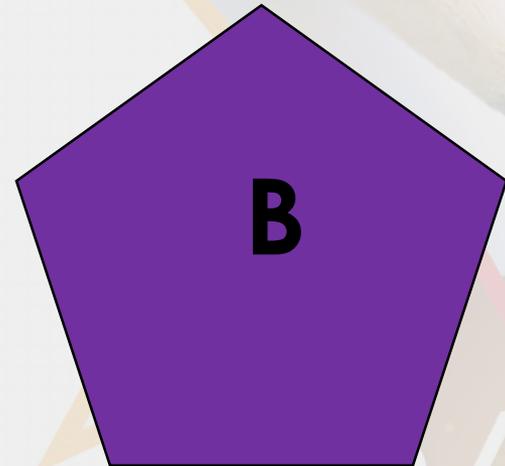
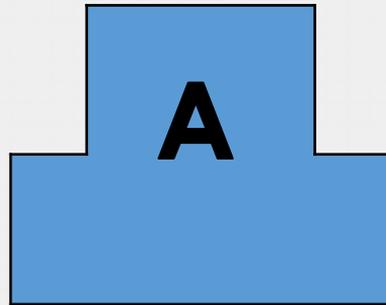
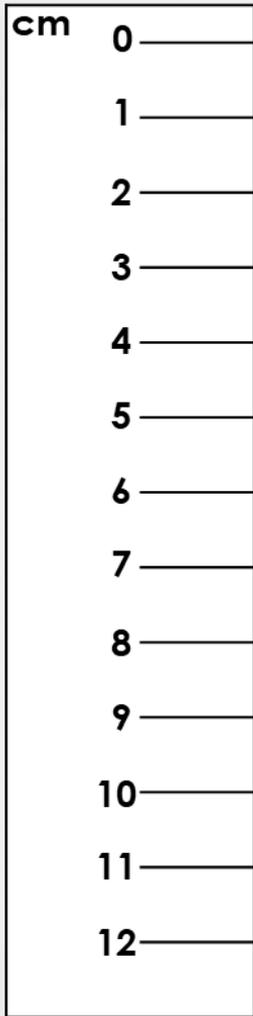
Find the perimeter of this shape.



$$8\text{cm} + 4\text{cm} + 8\text{cm} + 4\text{cm} = 24\text{cm}$$

Varied Fluency 2

Match the shape to its perimeter.

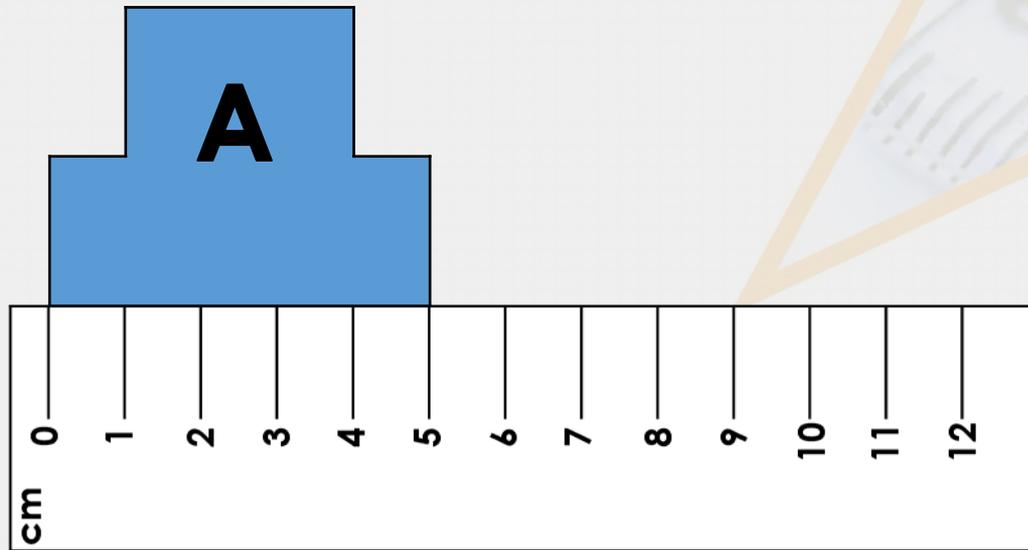


20cm

22cm

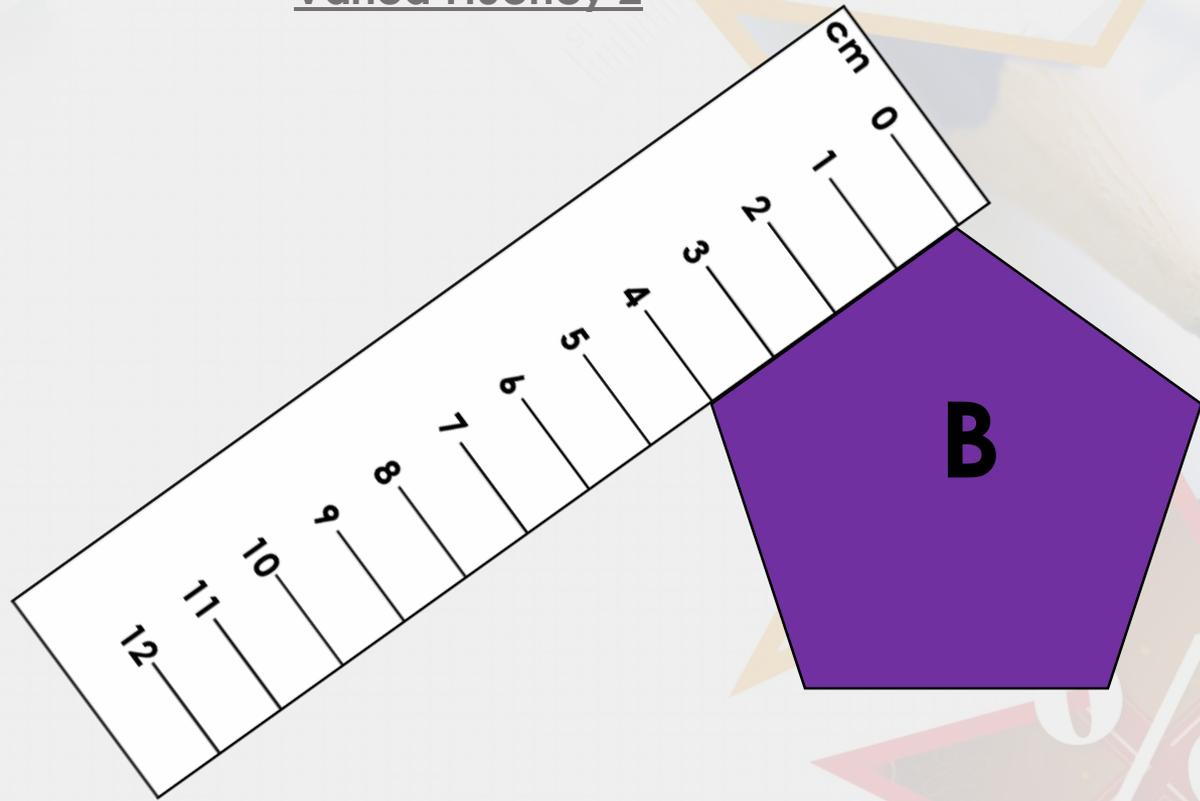
18cm

Varied Fluency 2



Measure each side with a ruler.

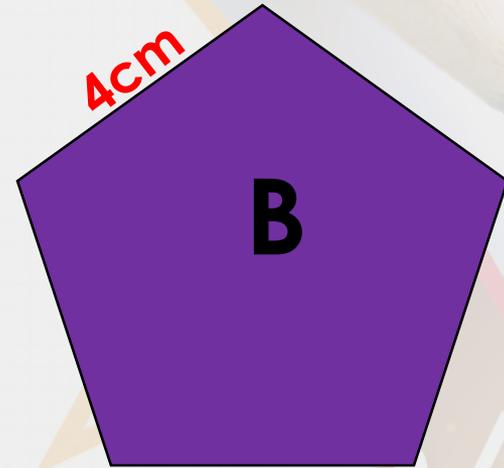
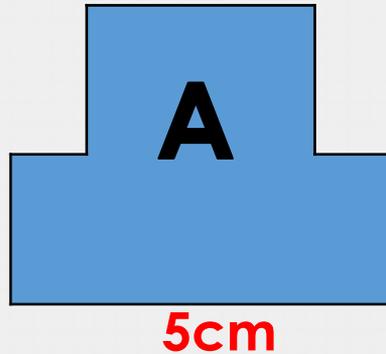
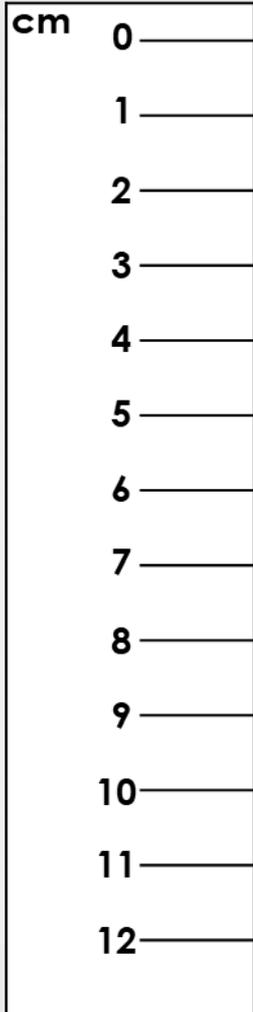
Varied Fluency 2



Measure each side with a ruler.

Varied Fluency 2

Match the shape to its perimeter.



The sides measured were 5cm on shape A
and 4cm on shape B.

Now measure any other sides needed
using the same method.

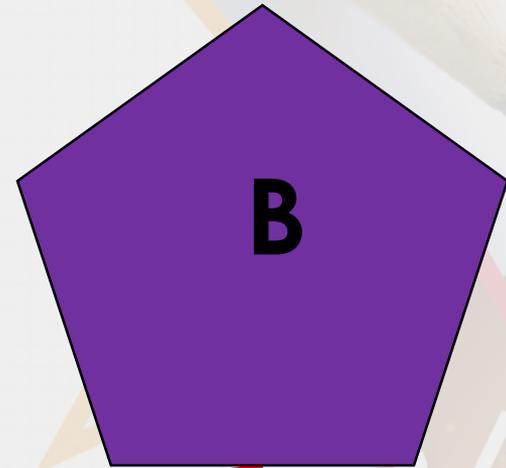
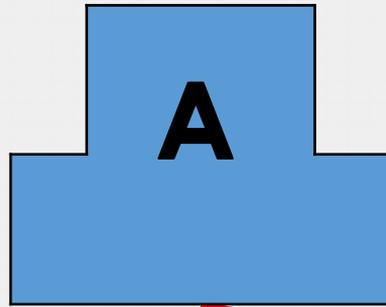
20cm

22cm

18cm

Varied Fluency 2

Match the shape to its perimeter.



20cm

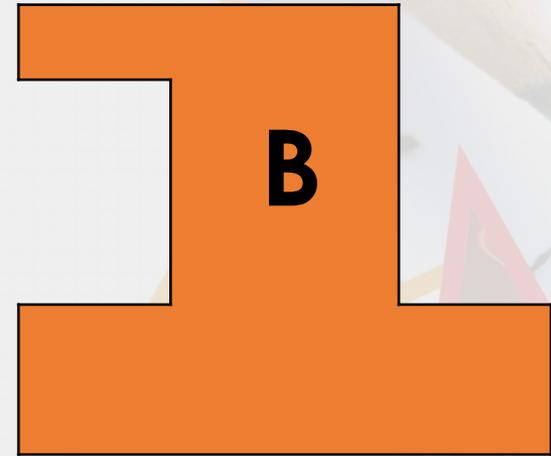
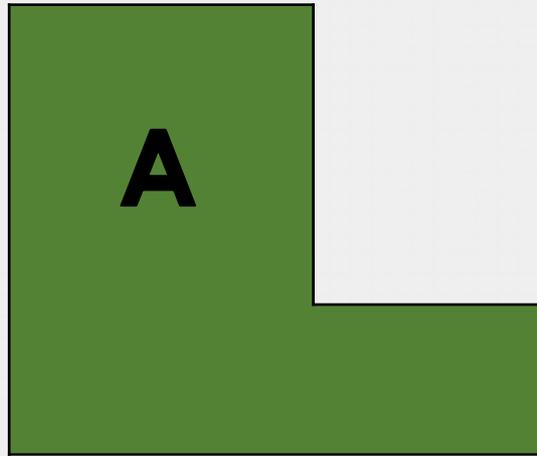
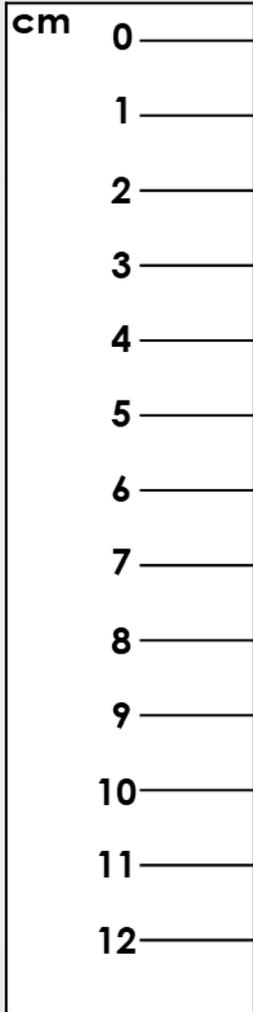
22cm

18cm

Shape A: $5\text{cm} + 2\text{cm} + 1\text{cm} + 2\text{cm} + 3\text{cm} + 2\text{cm} + 1\text{cm} = 18\text{cm}$
Shape B: $4\text{cm} + 4\text{cm} + 4\text{cm} + 4\text{cm} + 4\text{cm} = 20\text{cm}$

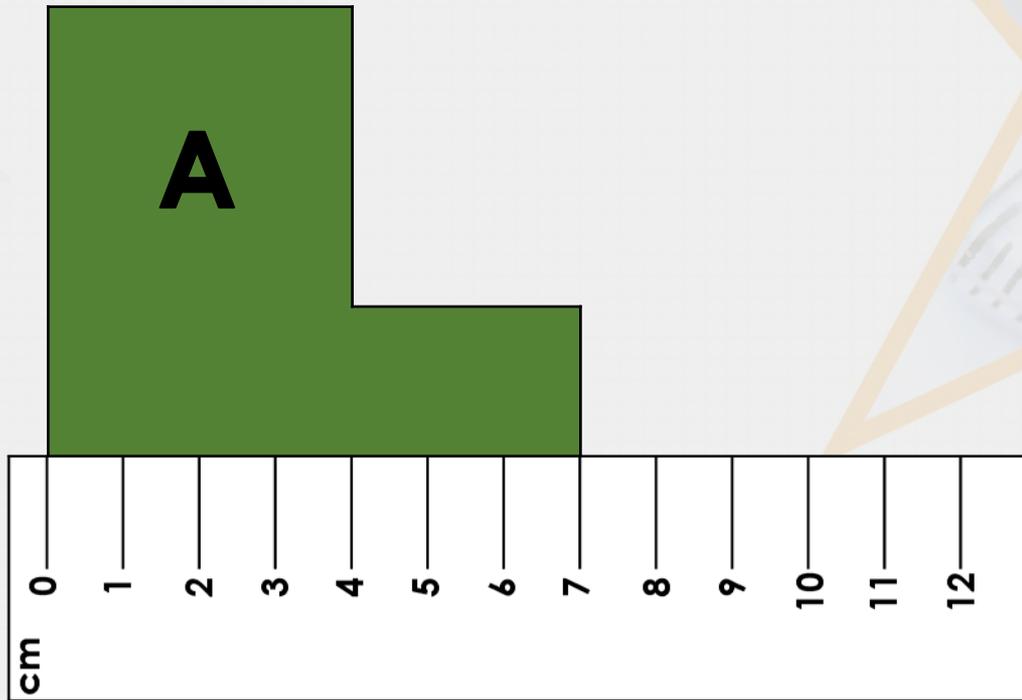
Varied Fluency 3

Which shape has the longest perimeter?



Varied Fluency 3

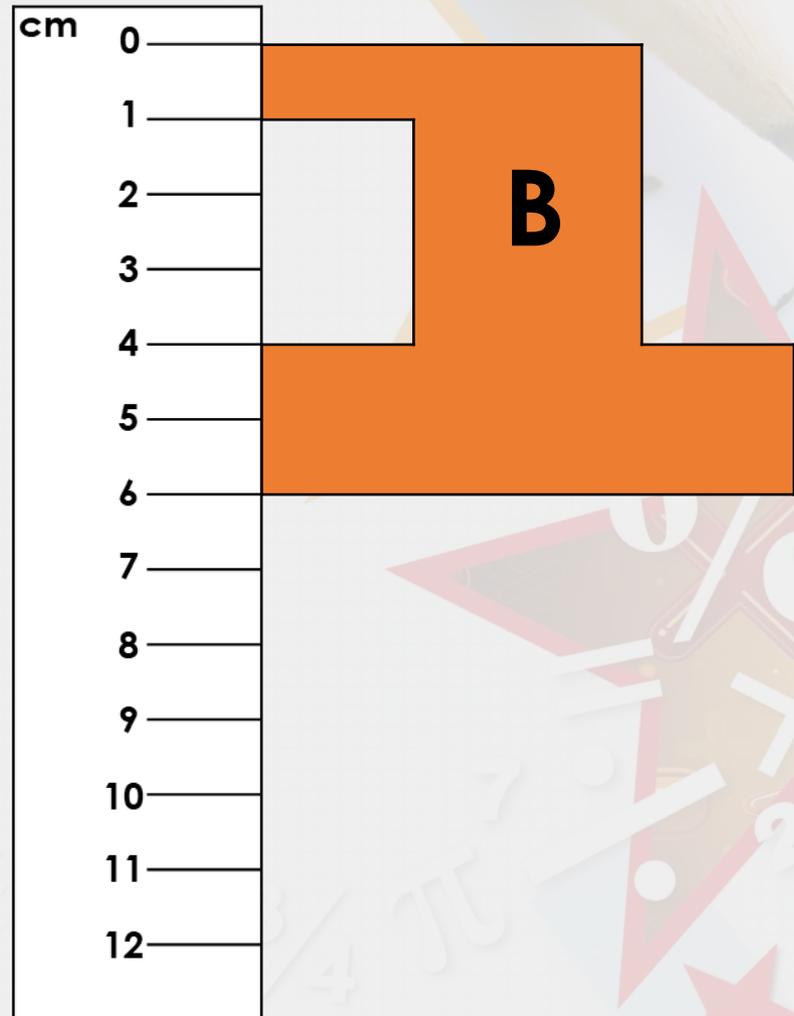
Which shape has the longest perimeter?



Measure each side with a ruler.

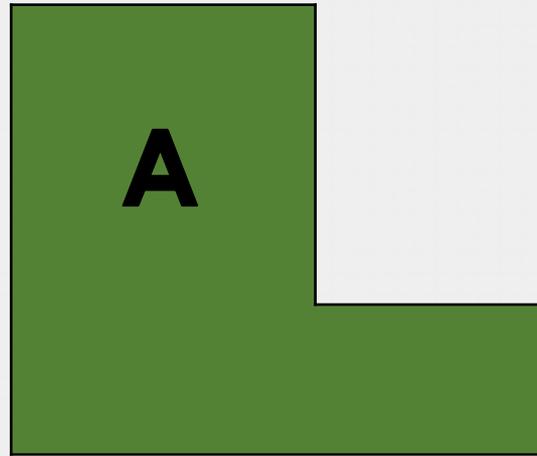
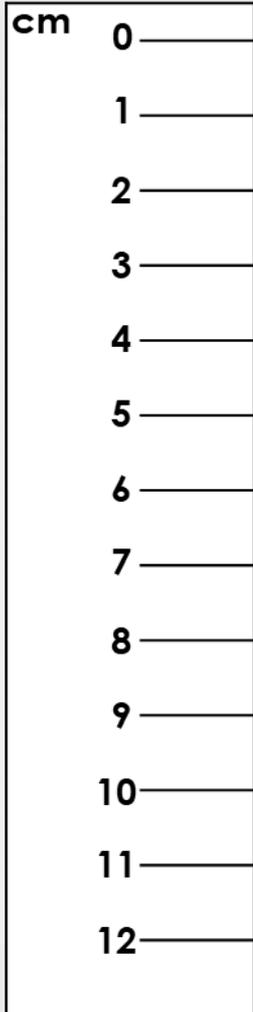
Varied Fluency 3

Which shape has the longest perimeter?

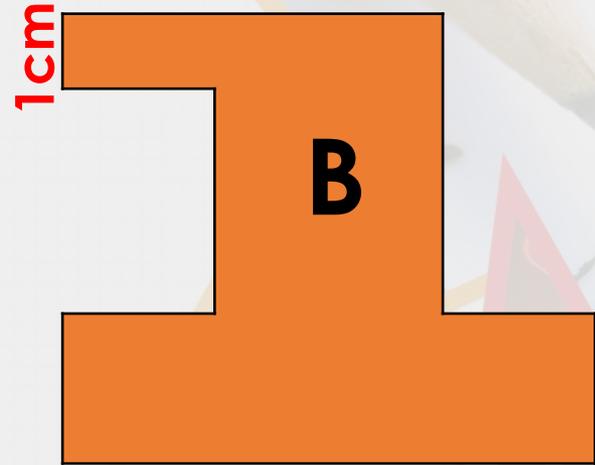


Varied Fluency 3

Which shape has the longest perimeter?



7cm



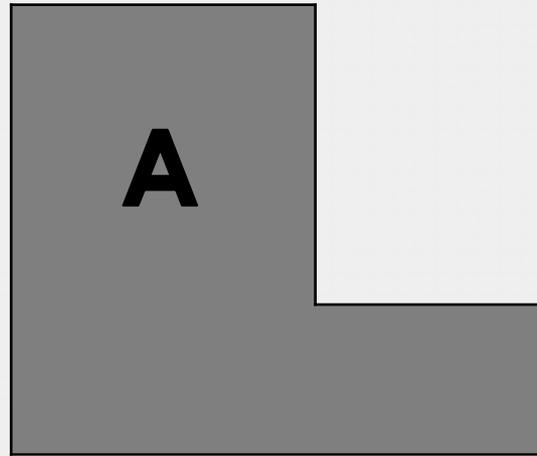
1cm

The sides measured were 7cm on shape A
and 1cm on shape B.

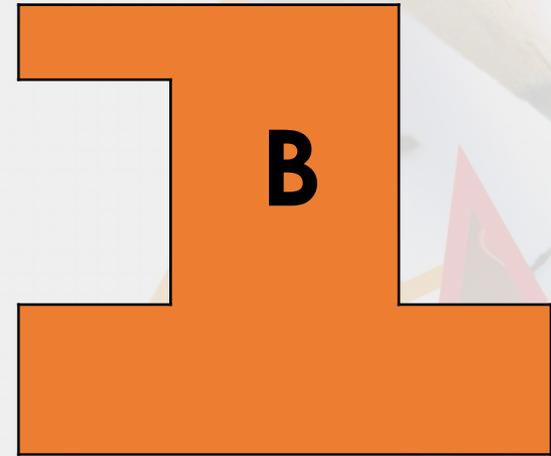
Now measure any other sides needed
using the same method.

Varied Fluency 3

Which shape has the longest perimeter?



26cm



30cm

Shape B

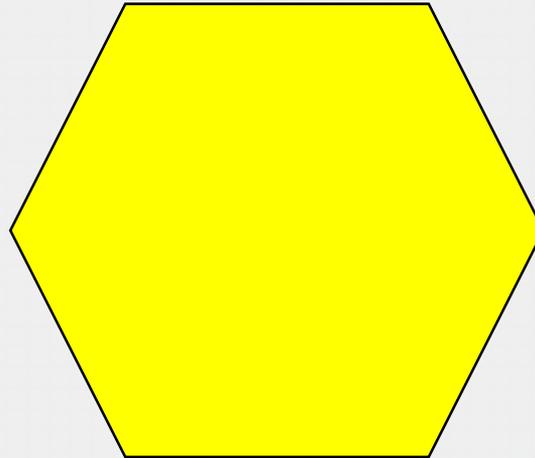
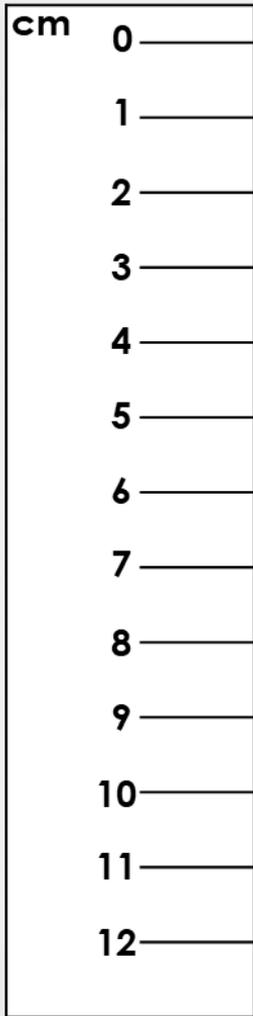
$$\text{Shape A: } 7\text{cm} + 6\text{cm} + 4\text{cm} + 4\text{cm} + 3\text{cm} + 2\text{cm} = 26\text{cm}$$

$$\text{Shape B: } 7\text{cm} + 2\text{cm} + 2\text{cm} + 3\text{cm} + 2\text{cm} + 1\text{cm} + 5\text{cm} + 4\text{cm} + 2\text{cm} + 2\text{cm} = 30\text{cm}$$

Varied Fluency 4

True or false?

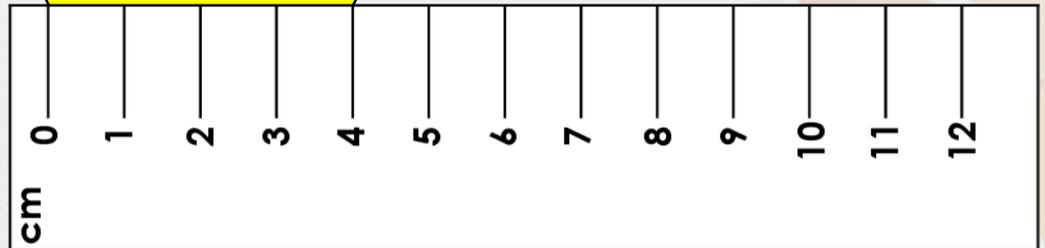
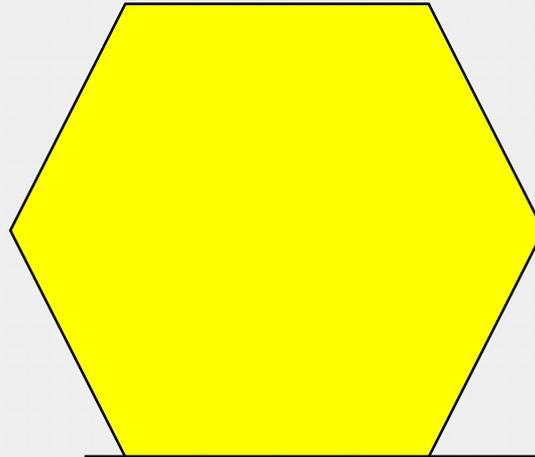
The perimeter of this shape is 26cm.



Varied Fluency 4

True or false?

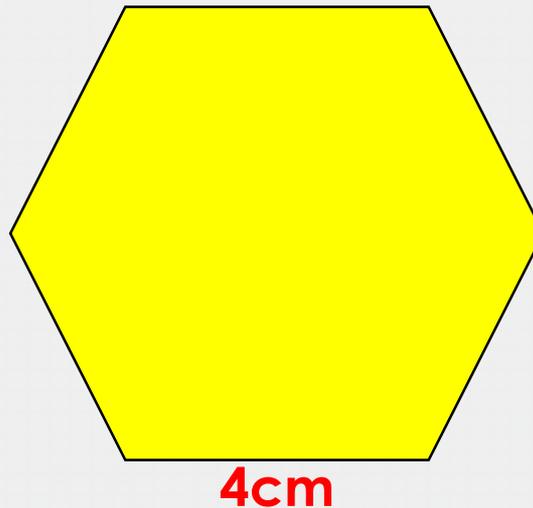
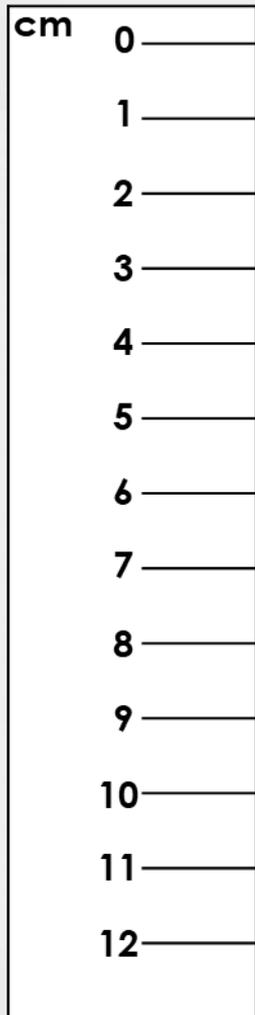
The perimeter of this shape is 26cm.



Varied Fluency 4

True or false?

The perimeter of this shape is 26cm.

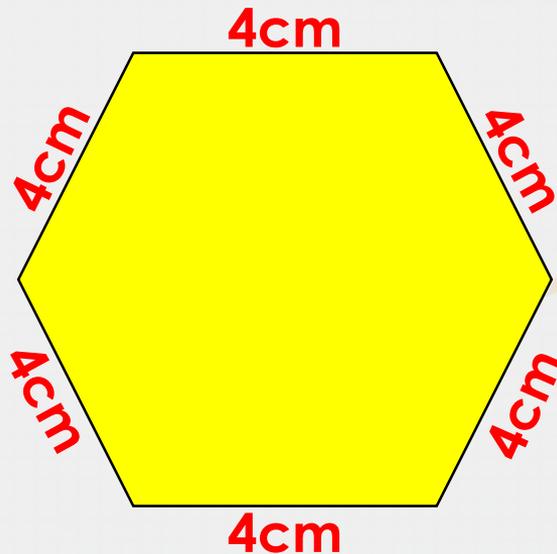


The side measured was 4cm. Now measure any other sides needed using the same method.

Varied Fluency 4

True or false?

The perimeter of this shape is 26cm.

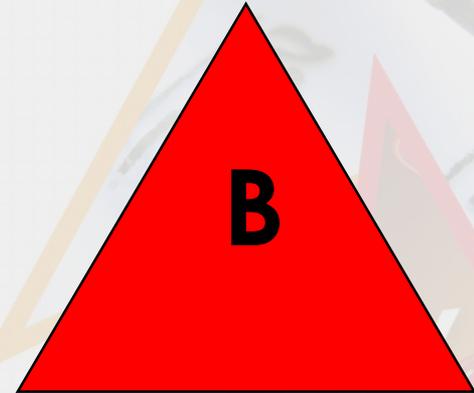
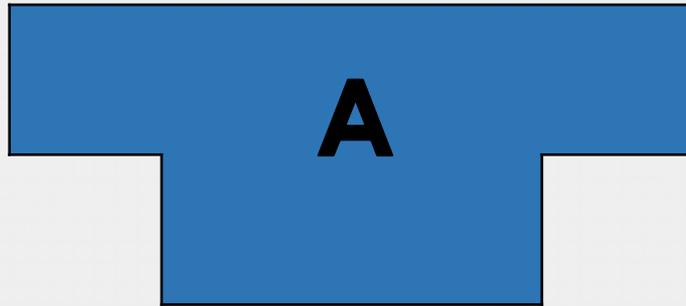
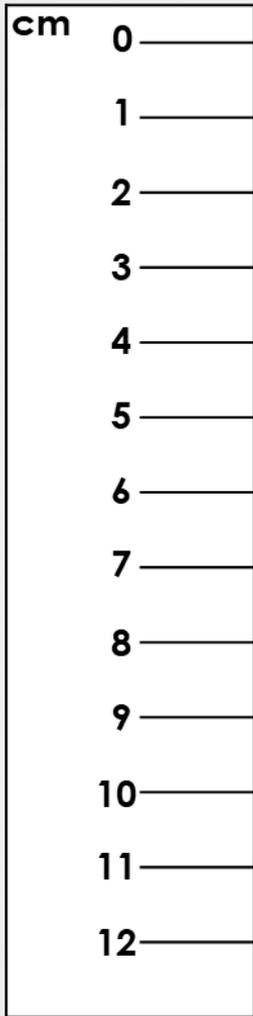


**False. The perimeter of this shape is 24cm.
 $4\text{cm} + 4\text{cm} + 4\text{cm} + 4\text{cm} + 4\text{cm} + 4\text{cm} = 24\text{cm}$**

Problem Solving 1

True or false?

The perimeters of these shapes are the same.

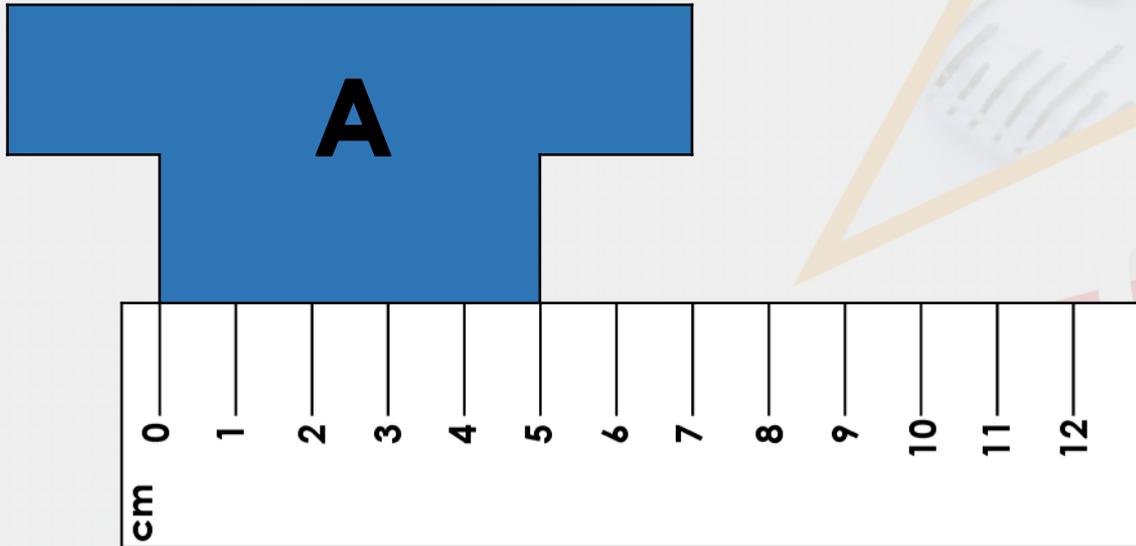


Prove it!

Problem Solving 1

True or false?
The perimeters of these shapes are the same.

Measure each side with a ruler.

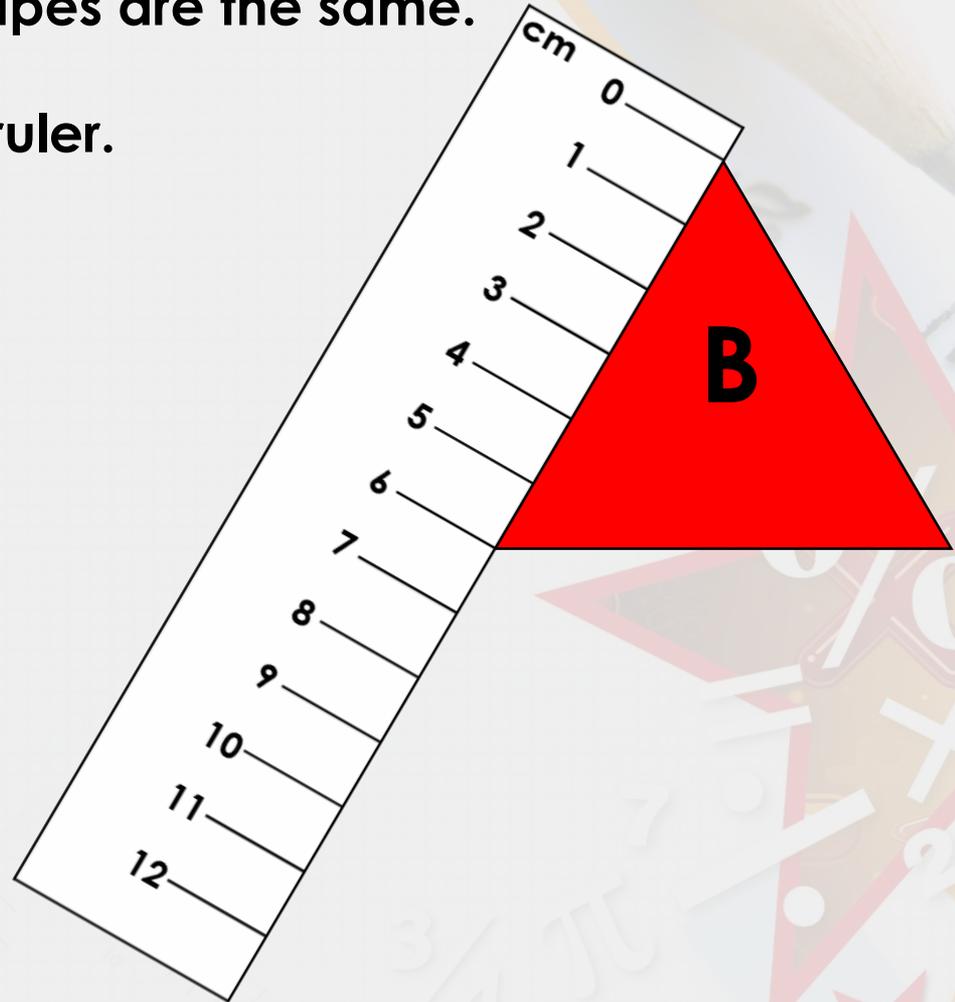


Problem Solving 1

True or false?

The perimeters of these shapes are the same.

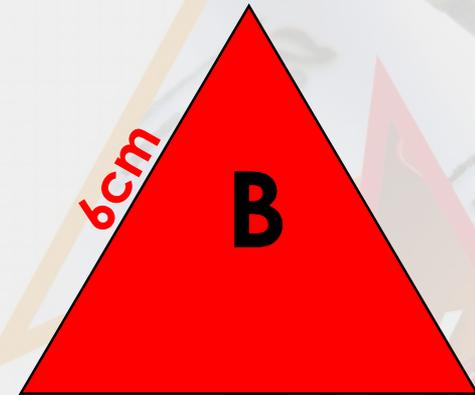
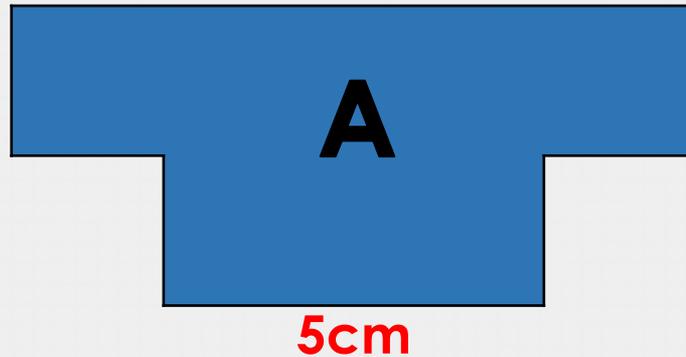
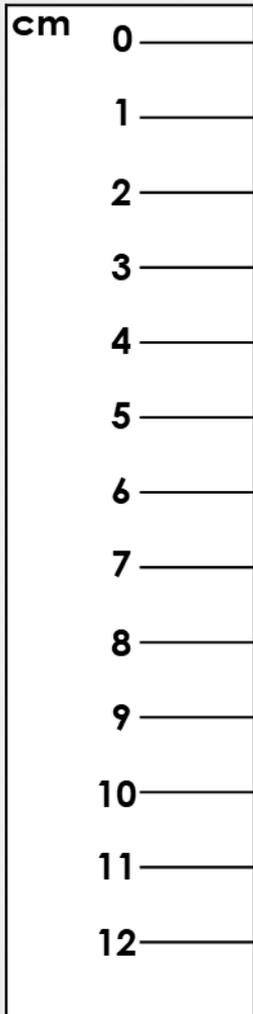
Measure each side with a ruler.



Problem Solving 1

True or false?

The perimeters of these shapes are the same.



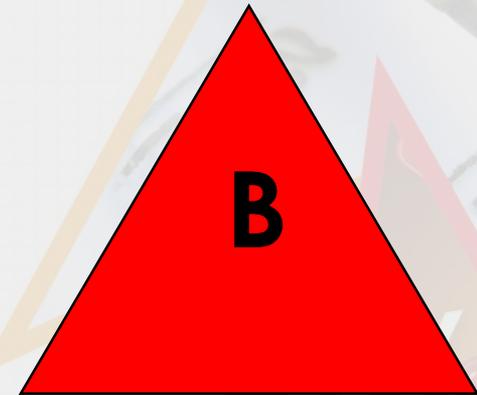
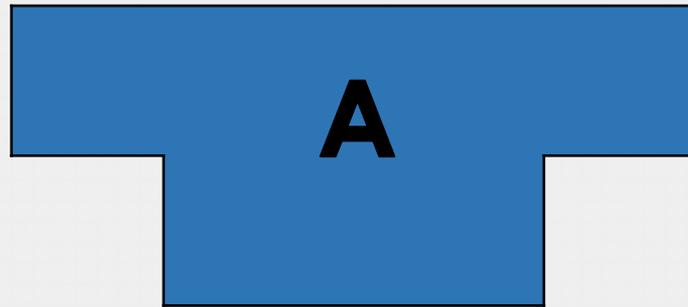
**The sides measured were 5cm on shape A
and 6cm on shape B.**

**Now measure any other sides needed
using the same method.**

Problem Solving 1

True or false?

The perimeters of these shapes are the same.



Prove it!

False. Shape A = 26cm and Shape B = 18cm.

Shape A: $5\text{cm} + 2\text{cm} + 2\text{cm} + 2\text{cm} + 9\text{cm} + 2\text{cm} + 2\text{cm} + 2\text{cm} = 26\text{cm}$

Shape B: $6\text{cm} + 6\text{cm} + 6\text{cm} = 18\text{cm}$

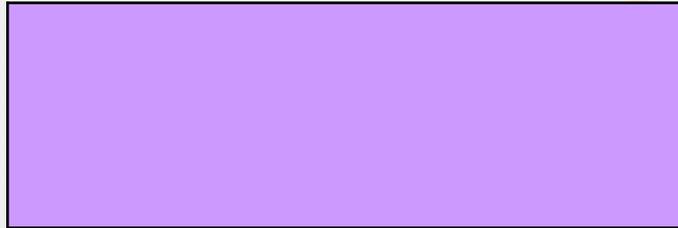


Reasoning 1

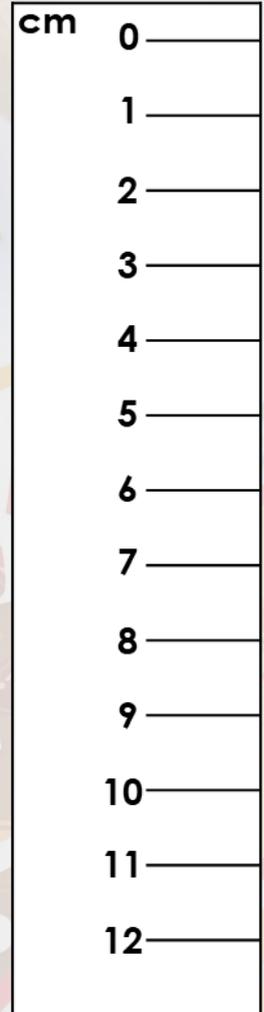
Freya says,



I used a ruler to measure the shape below. The perimeter is 12cm.



What mistake has Freya made? Prove it!

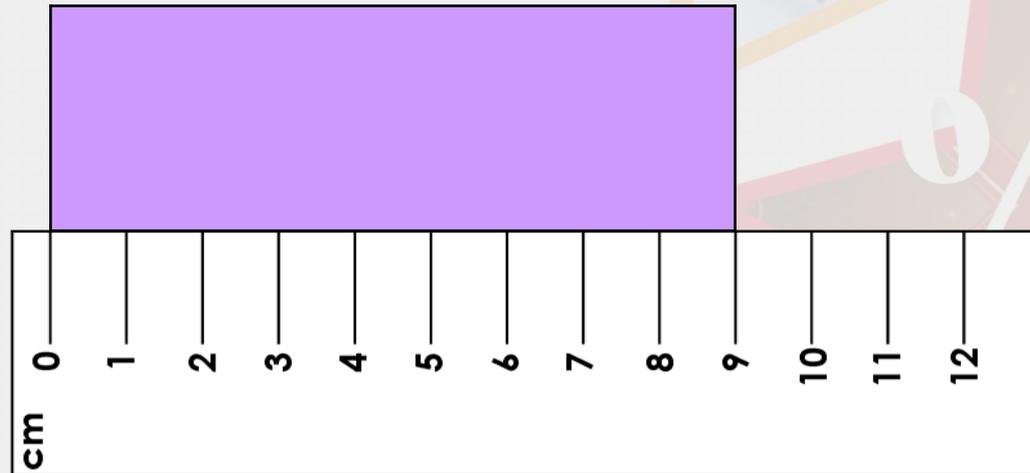


Reasoning 1

Freya says,



I used a ruler to measure the shape below. The perimeter is 12cm.



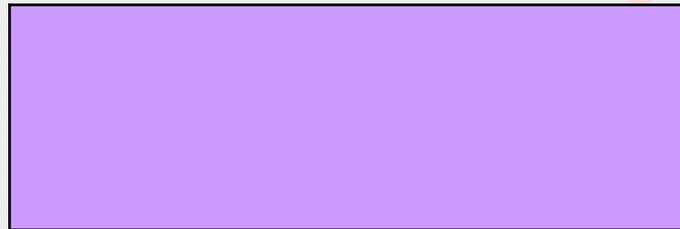
Measure each side with a ruler.

Reasoning 1

Freya says,



I used a ruler to measure the shape below. The perimeter is 12cm.



9cm

The side measured was 9cm.
Now measure any other sides needed using the same method.

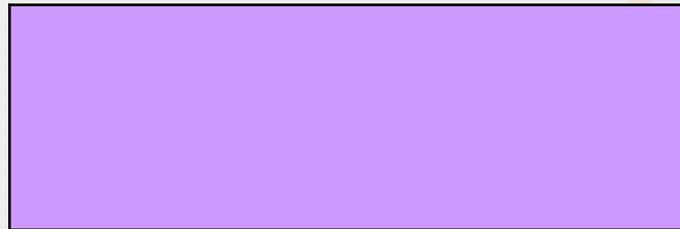


Reasoning 1

Freya says,

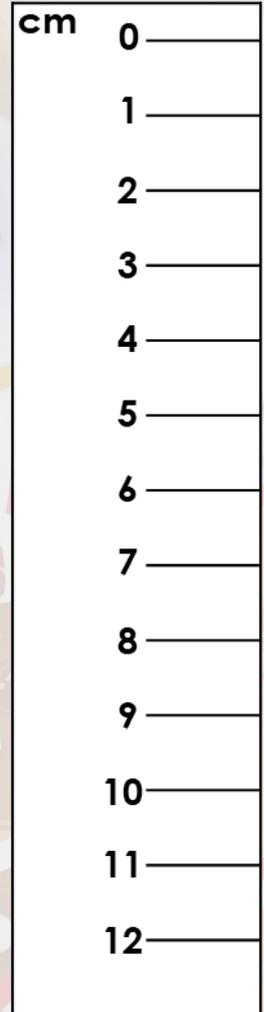


I used a ruler to measure the shape below. The perimeter is 12cm.



9cm

What mistake has Freya made? Prove it!
The perimeter of the shape is ...

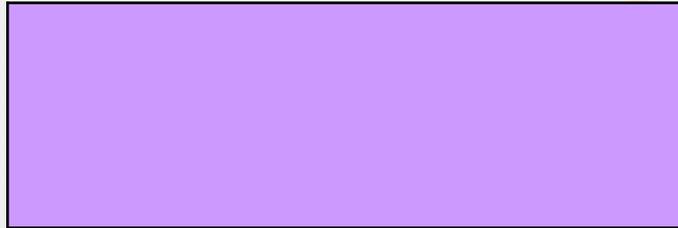


Reasoning 1

Freya says,



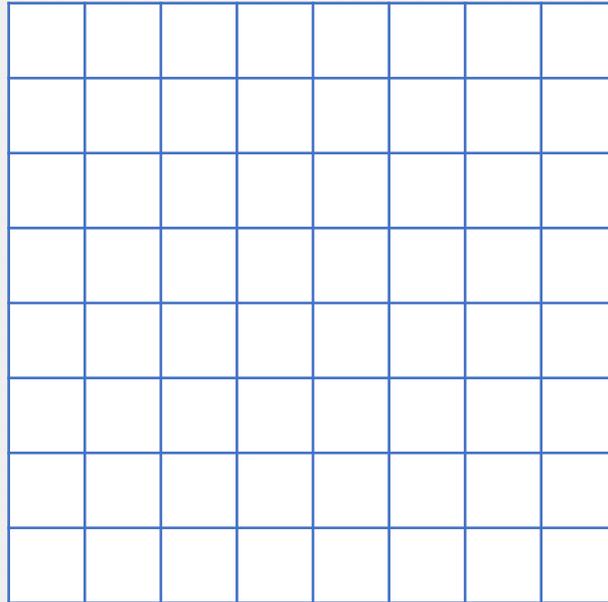
I used a ruler to measure the shape below. The perimeter is 12cm.



What mistake has Freya made? Prove it!
The perimeter of the shape is 24cm, not 12cm.
Freya has only added two of the four sides.
 $9\text{cm} + 3\text{cm} + 9\text{cm} + 3\text{cm} = 24\text{cm}$

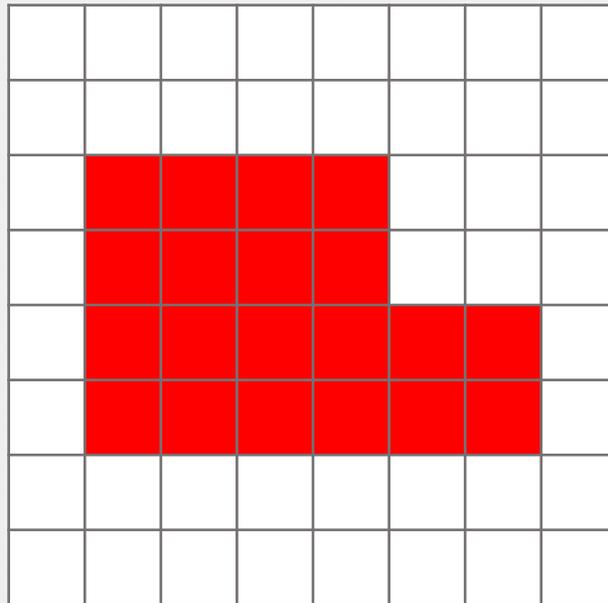
Problem Solving 2

On 1cm squared paper draw a 6-sided rectilinear shape with a perimeter that is more than 18cm and less than 22cm, and that is an even number.



Problem Solving 2

On 1cm squared paper draw a 6-sided rectilinear shape with a perimeter that is more than 18cm and less than 22cm, and that is an even number.



Various answers, for example:
 $4\text{cm} + 2\text{cm} + 2\text{cm} + 2\text{cm} + 6\text{cm} + 4\text{cm} = 20\text{cm}$