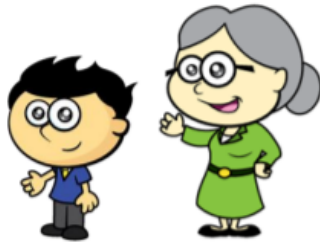


Reasoning and Problem Solving

Rosie, Alex and Mo are comparing the height of Mrs Rose and Jack.



Rosie



Mrs Rose is tall than Jack.

Alex



Jack is short than Mrs Rose.

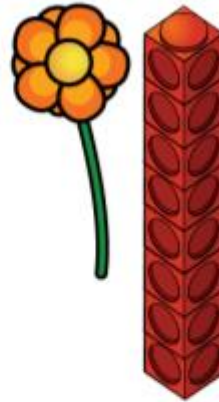
Mo



Mrs Rose is longer than Jack.

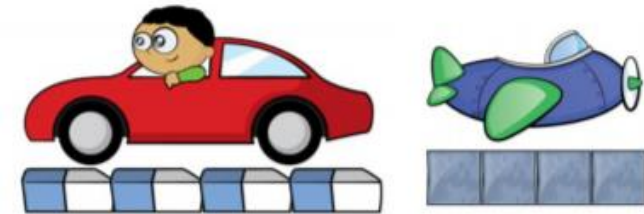
Can you improve their sentences to make them more accurate?

True or false?



The flower is 8 cubes tall.
Explain your answer.

Whitney measures the length of two toys.



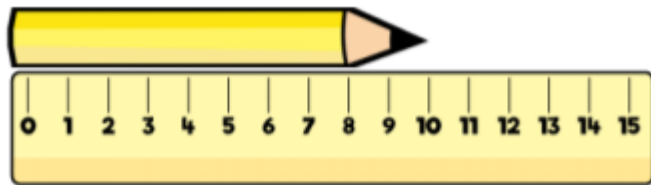
She says,



The toys are the same length.

Do you agree with Whitney?
Explain your answer.

Teddy measures the length of the pencil.



He says,



The length of the pencil is 10 cm.

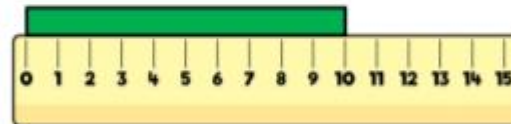
Do you agree with Teddy?
Explain why.

Eva, Dexter and Rosie are comparing ribbons that they have.
Unfortunately, Dexter has lost his ribbon.

He says,



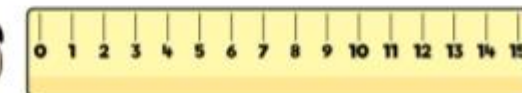
My ribbon is shorter than Rosie's, but longer than Eva's.



Eva



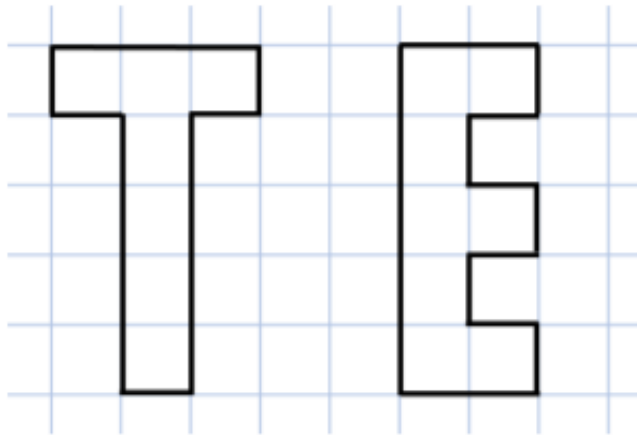
Rosie



Dexter

How long could Dexter's ribbon be?

Which of these shapes has the longest perimeter?



Explore other letters which could be drawn as rectilinear shapes.

Put them in order of shortest to longest perimeter.

Can you make a word?

You have 10 paving stones to design a patio. The stones are one metre square.

The stones must be joined to each other so that at least one edge is joined corner to corner.



Use squared paper to show which design would give the longest perimeter and which would give the shortest.

The width of a rectangle is 2 metres less than the length.

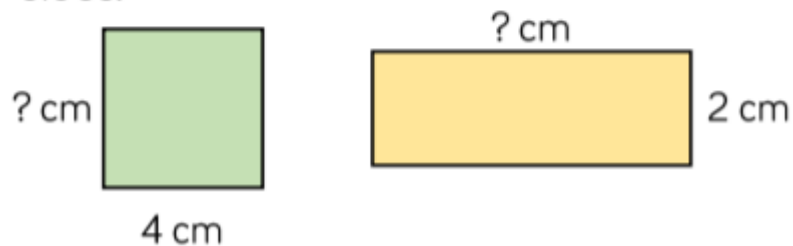
The perimeter of the rectangle is between 20 m and 30 m.

What could the dimensions of the rectangle be?

Draw all the rectangles that fit these rules.
Use $1 \text{ cm} = 1 \text{ m}$.

Each of the shapes have a perimeter of 16 cm.

Calculate the lengths of the missing sides.



Always, Sometimes, Never

When all the sides of a rectangle are odd numbers, the perimeter is even.

Prove it.

Here is a square. Each of the sides is a whole number of metres.



Which of these lengths could be the perimeter of the shape?

24 m, 34 m, 44 m, 54 m, 64 m, 74 m

Why could the other values not be the perimeter?