

Lesson 1 – Measurement: Perimeter and Area - Measure Perimeter

NC Objective:
Measure and calculate the perimeter of composite rectilinear shapes in cm and m

Resources needed:
Differentiated Sheets
Teaching Slides
Rulers

Vocabulary:
Side lengths, perimeter, composite rectilinear shapes, measure, calculate

Children measure the perimeter of rectilinear shapes from diagrams without grids. They will recap measurement skills and recognise that they need to use their ruler accurately in order to get the correct answer. They could consider alternative methods when dealing with rectangles e.g. $l + w + l + w$ or $(l \times w) \times 2$. In this lesson, children will draw the shapes directly in their books using a ruler. Once the shape has been drawn, they work out the perimeter and order the perimeter size from greatest to smallest or smallest to greatest.

Key Questions:

What is perimeter of a shape? What's the same/different about these shapes?

Do we need to measure every side? Once we have measured each side, how do we calculate the perimeter?

★ Working Towards

★★ Working Within

★★★ Greater Depth

On this sheet, they work with perimeters in either whole cm or whole mm. They find some missing lengths, due to drawing the shapes themselves, they can use rulers rather than calculate the missing length which is the next step.

On this sheet, they work with perimeters in both cm and mm. They find some missing lengths, due to drawing the shapes themselves, they can use rulers rather than calculate the missing length, which is the next step. Shapes are slightly more adventurous than the previous sheet.

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Reasoning & Problem Solving

Activity

In how many different ways you can make a rectangle with a perimeter of 40 cm?
Investigate!

Activity

In how many different ways you can make rectangle with a perimeter of 56 cm?
Investigate!

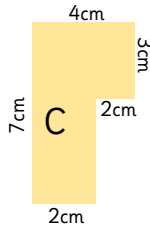
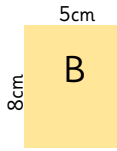
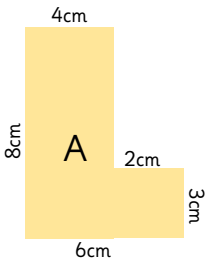
Activity

Investigate different ways you can make composite rectilinear shapes with a perimeter of 56 cm.



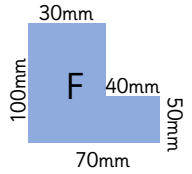
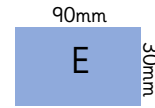
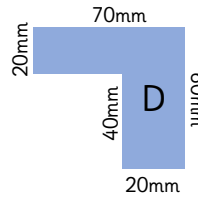
Draw to scale.
Order them from smallest perimeter to greatest.

Not to scale.



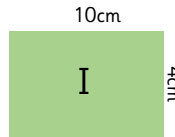
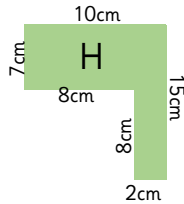
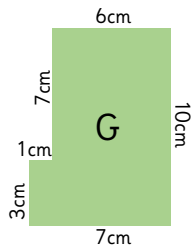
Draw to scale.
Order them from greatest perimeter to smallest.

Not to scale.



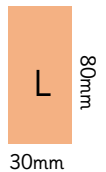
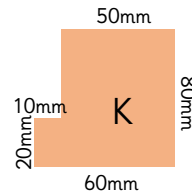
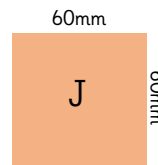
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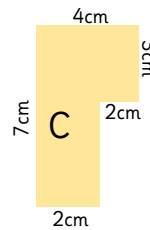
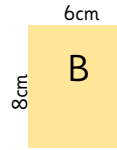
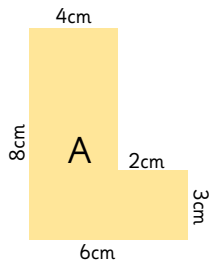
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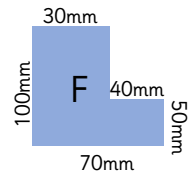
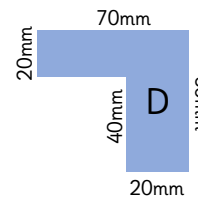
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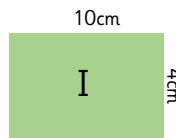
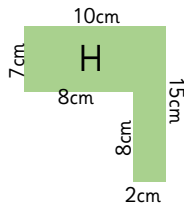
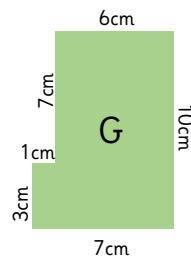
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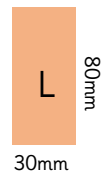
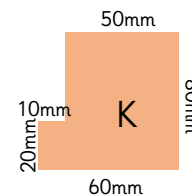
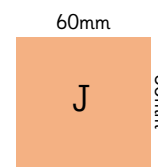
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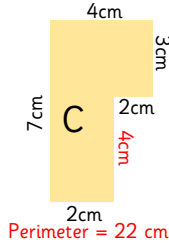
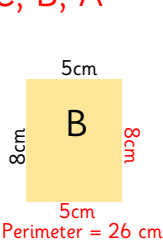
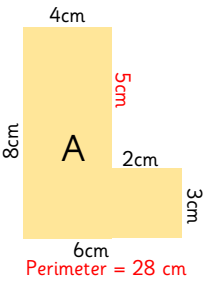


Draw to scale.

Order them from smallest perimeter to greatest.

Not to scale.

C, B, A

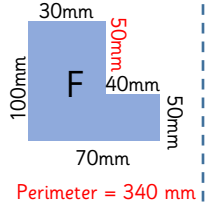
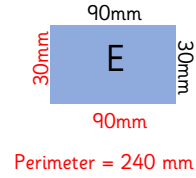
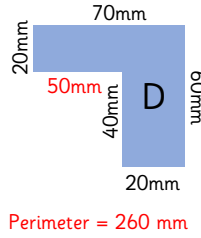


Draw to scale.

Order them from greatest perimeter to smallest.

Not to scale.

F, D, E

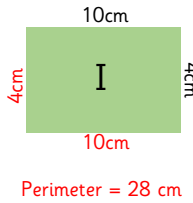
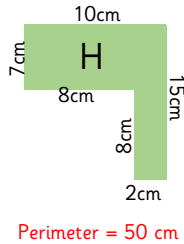
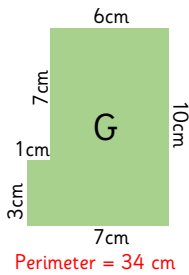


Draw to scale.

Order them from smallest perimeter to greatest.

Not to scale.

I, G, H

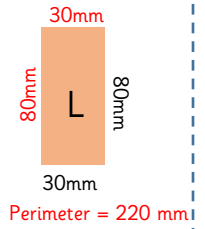
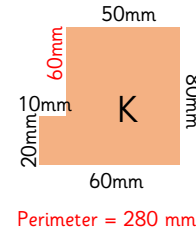
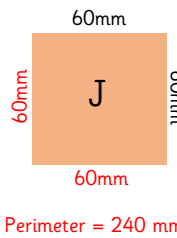


Draw to scale.

Order them from greatest perimeter to smallest.

Not to scale.

K, J, L

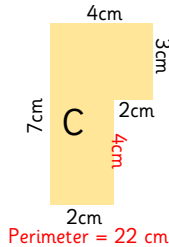
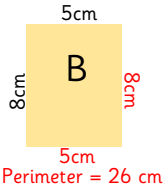
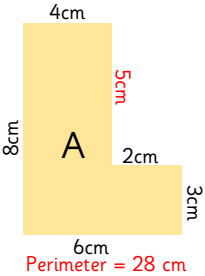


Draw to scale.

Order them from smallest perimeter to greatest.

Not to scale.

C, B, A

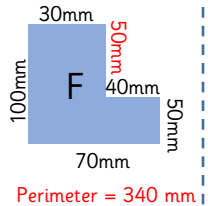
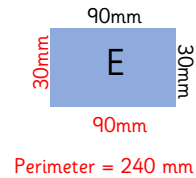
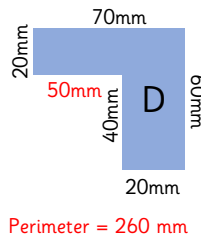


Draw to scale.

Order them from greatest perimeter to smallest.

Not to scale.

F, D, E

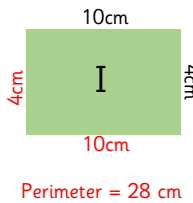
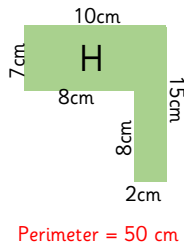
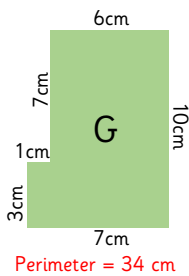


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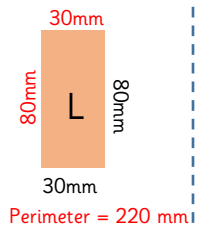
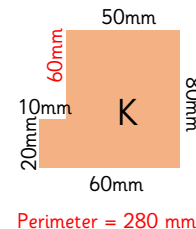
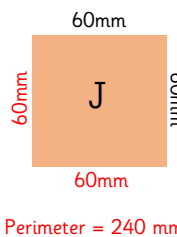


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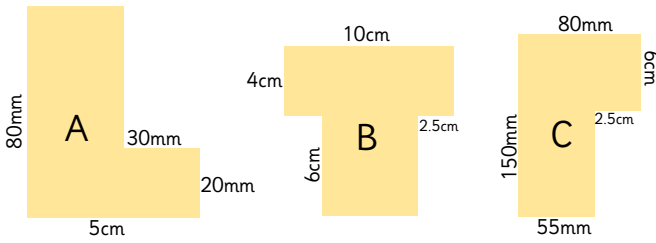
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K, J, L

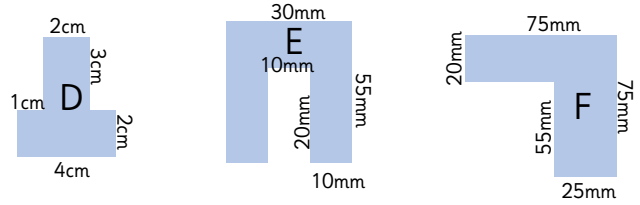




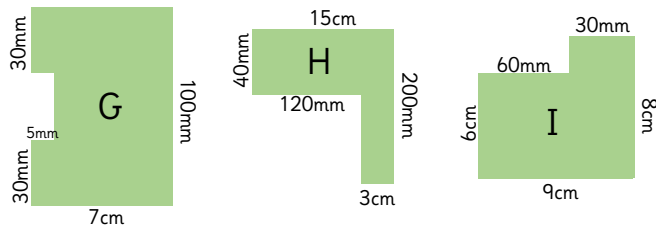
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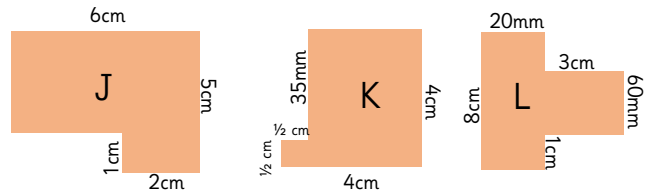
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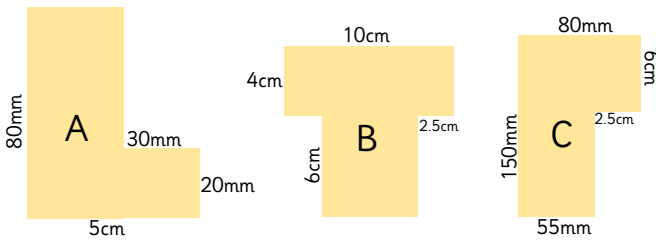
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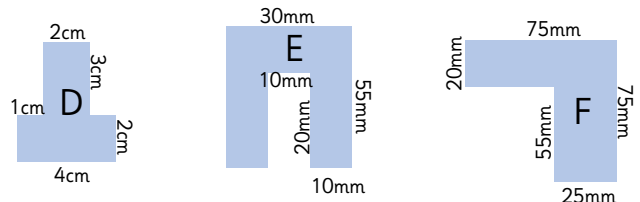
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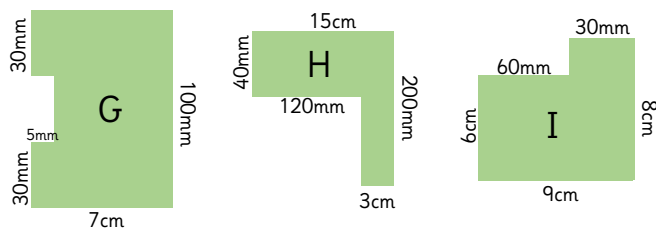
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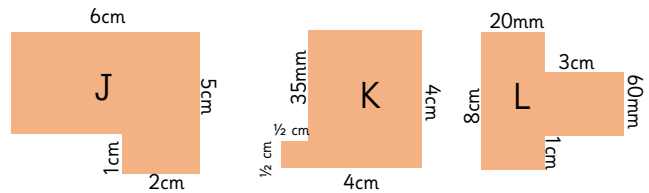
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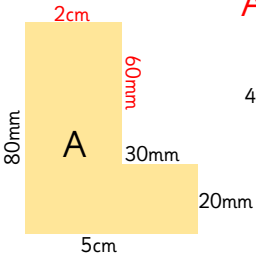




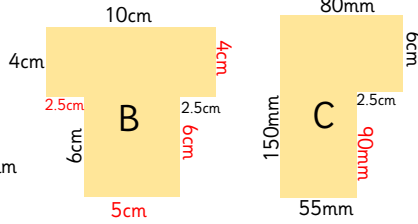
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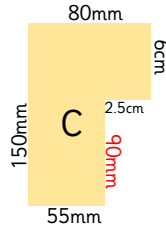
A, B, C



Perimeter = 260 mm
26 cm



Perimeter = 400 mm
40 cm

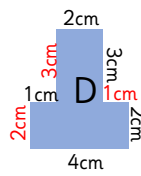


Perimeter = 460 mm
46 cm

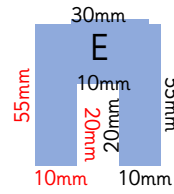
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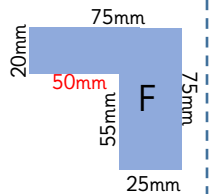
F, E, D



Perimeter = 18 cm



Perimeter = 210 mm

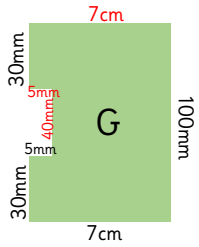


Perimeter = 300 mm

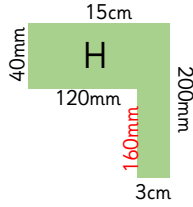
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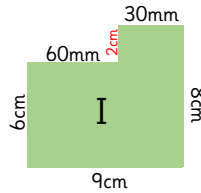
I, G, H



Perimeter = 350 mm
35 cm



Perimeter = 700 mm
70 cm

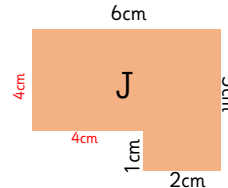


Perimeter = 340 mm
34 cm

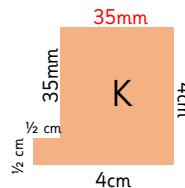
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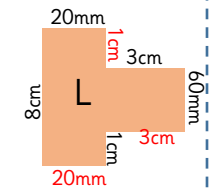
L, J, K



Perimeter = 22 cm



Perimeter = 160 mm
16 cm



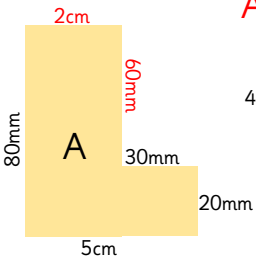
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26 cm



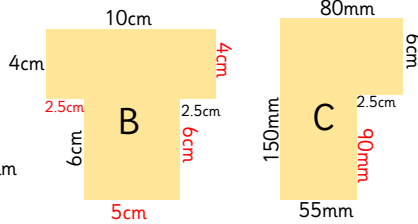
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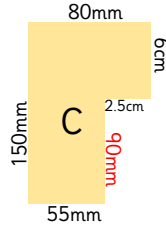
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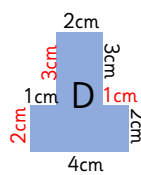


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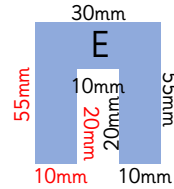
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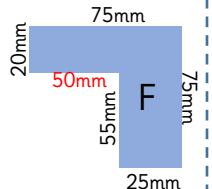
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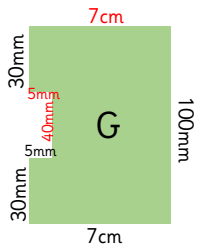


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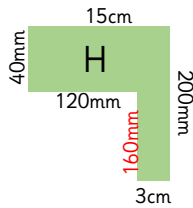
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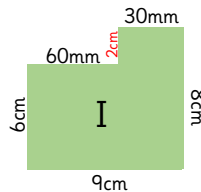
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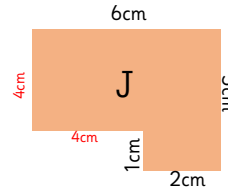


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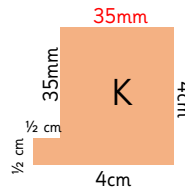
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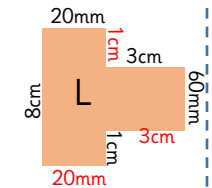
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Perimeter = 160 mm
16 cm

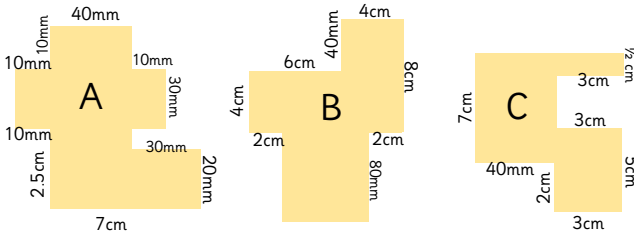


Perimeter = 260 mm
26 cm



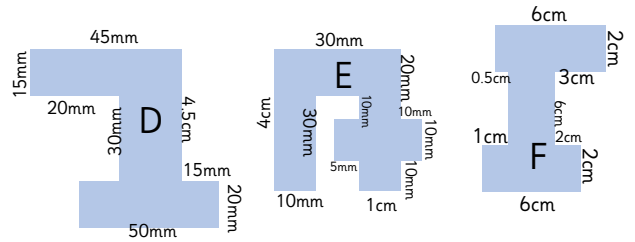
Draw to scale.

Order them from smallest perimeter to greatest.



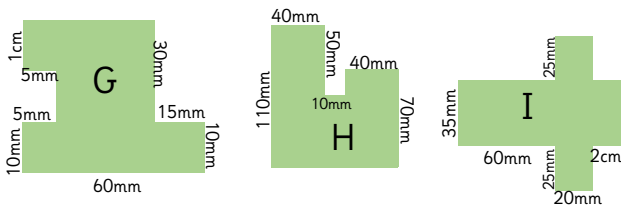
Draw to scale.

Order them from greatest perimeter to smallest.



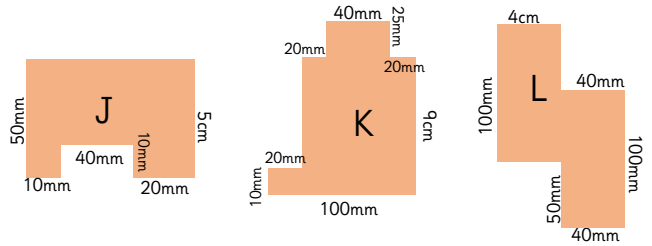
Draw to scale.

Order them from smallest perimeter to greatest.



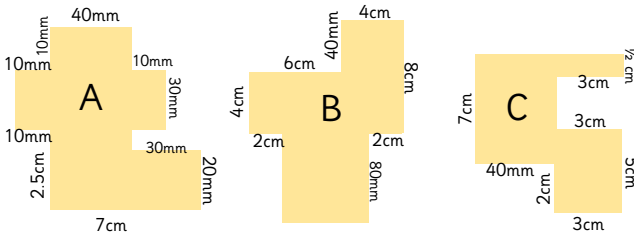
Draw to scale.

Order them from greatest perimeter to smallest.



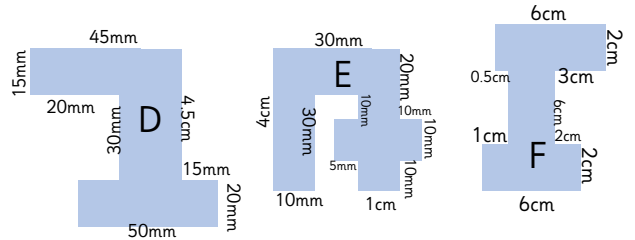
Draw to scale.

Order them from smallest perimeter to greatest.



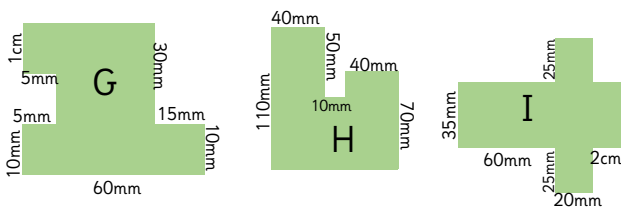
Draw to scale.

Order them from greatest perimeter to smallest.



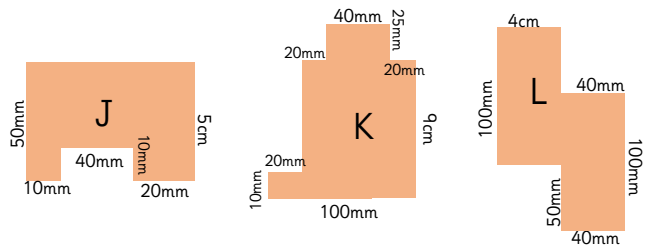
Draw to scale.

Order them from smallest perimeter to greatest.



Draw to scale.

Order them from greatest perimeter to smallest.





Activity

In how many different ways you
can make a rectangle
with a perimeter of 40 cm?

Investigate!



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In how many different ways you can make a rectangle with a perimeter of 40 cm?

Examples

Investigate!

Square (which is a rectangle) – 10 cm length and height
15cm length and 5 cm width
14cm width, 6cm length



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Square (which is a rectangle) – 10 cm length and height
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Square (which is a rectangle) – 10 cm length and height
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Activity

In how many different ways you
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with a perimeter of 56 cm?

Investigate!



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with a perimeter of 56 cm?

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Activity

In how many different ways you can make rectangle with a perimeter of 56 cm?

Investigate!

Many different ways.
For example, 12 cm by 16 cm,
10 cm by 18 cm,
5 cm by 23 cm.



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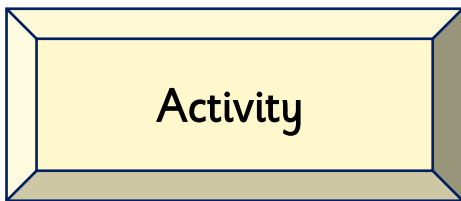


Activity

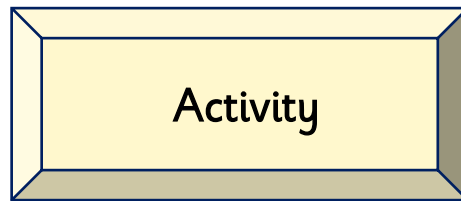
In how many different ways you can make rectangle with a perimeter of 56 cm?

Investigate!

Many different ways.
For example, 12 cm by 16 cm,
10 cm by 18 cm,
5 cm by 23 cm.



Investigate different ways
you can make composite
rectilinear shapes
with a perimeter of 56 cm.



Investigate different ways
you can make composite
rectilinear shapes
with a perimeter of 56 cm.



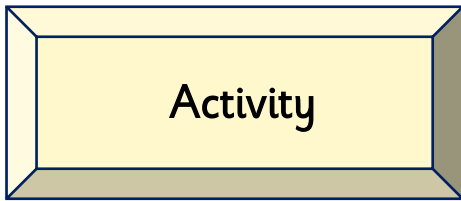
Investigate different ways
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Investigate different ways
you can make composite
rectilinear shapes
with a perimeter of 56 cm.



Answers



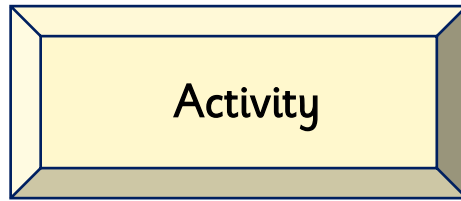
Activity

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Many different ways.



Answers



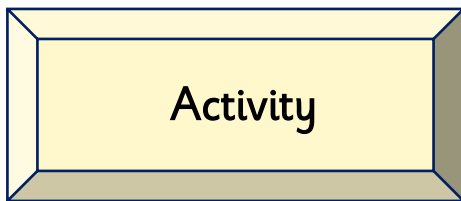
Activity

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Many different ways.



Answers



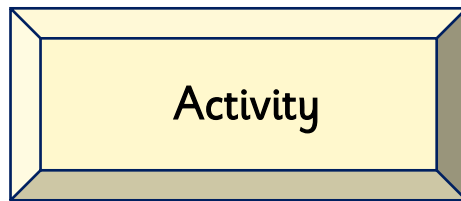
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Answers



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