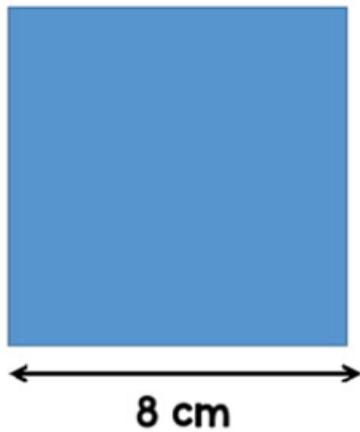


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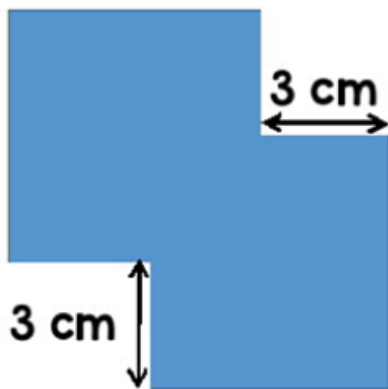
## Challenge 1

A square has sides of 8 cm.



A square with a side of 3 cm is cut off from two of the corners.

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What is the perimeter of the new shape?

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## Challenge 2

Simon gets some money for his birthday.

- Simon spends  $\frac{1}{2}$  of his money on a bike.
- He then gets **£20** more from his gran for his birthday.
- He spends  $\frac{1}{4}$  of what he has left on a new game.
- He has **£57** left.

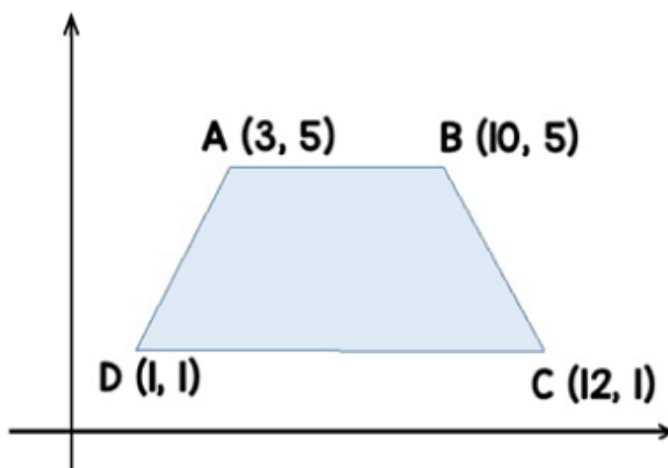
How much does Simon get for his birthday altogether?

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## Challenge 3

The diagram shows a trapezium **ABCD**.

The co-ordinates of the four vertices are shown.



Work out the **area** of the trapezium.

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## Challenge 4

Here are two number cards.



$P$  is **90** more than  $Q$ .

**20%** of  $P$  is equal to  $\frac{1}{5}$  of  $Q$ .

What is the value of  $P$ ?

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As a rough guide of difficulty level:

- **Challenge 1 to 4** are suitable for ages 11 to 15.

We want everyone to get involved with challenge day, so work together to solve as many as you can and share your solutions!

