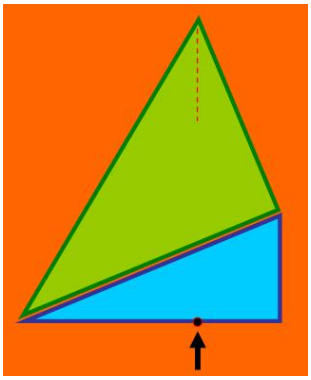
WEDGE ON WEDGE



Two right-angled triangles are connected together as shown in the diagram.

The green triangle has side lengths of 65, 52 and 39 cm and the blue triangle has side lengths of 52, 48 and 20 cm.

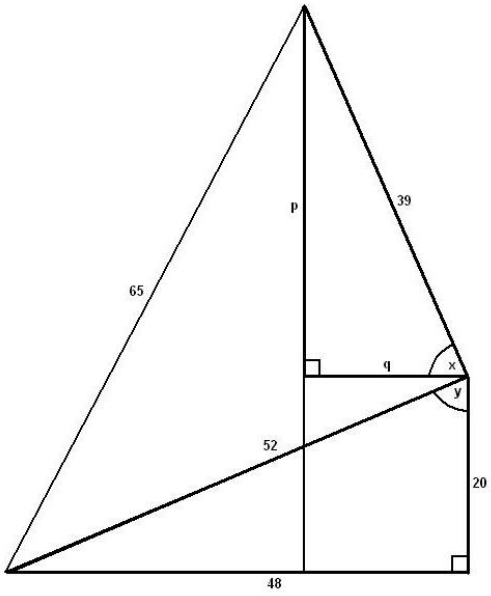
An object is dropped from the top of the green triangle hitting the base by the arrow.

Where does it hit the base of the blue triangle?

In what proportion is the blue base split and how far has the object fallen?

This problem does not require a calculator or any special formula.

HELP



This question is all about similar triangles.

If you need help in drawing the diagram, here it is.

Slowly read the question again and try to understand all the labelling on the diagram.

Prove that angles *x* and *y* are equal and find similar triangles in the diagram.

NEXT

How would you solve a related problem with numbers that you make up for yourself (or for your partner)? Can you describe a general strategy? Is all data given actually needed?