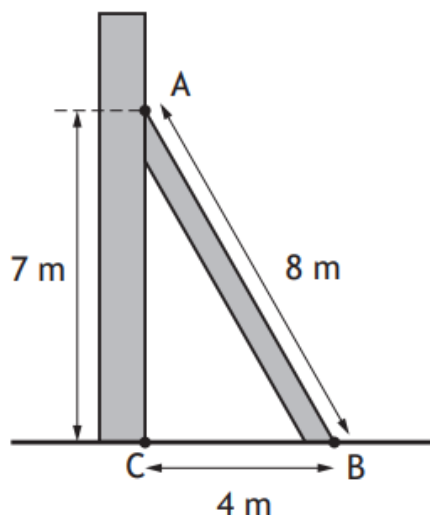


A wooden beam is used to support a wall built on horizontal ground as shown in the diagram.



The edge of the beam, AB, is 8 metres long.

C is at the foot of the wall.

A is 7 metres from C.

B is 4 metres from C.

Determine whether the wall is perpendicular to the ground.

**Justify your answer.**

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Answer:

$4^2 + 7^2 \neq 8^2$ , so by the Converse of Pythagoras' Theorem, the angle is not right-angled, so the wall is not perpendicular to the ground.

Note:

It is also possible to answer this question using the cosine rule.