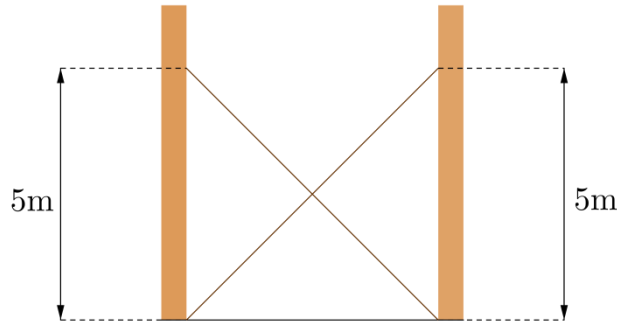


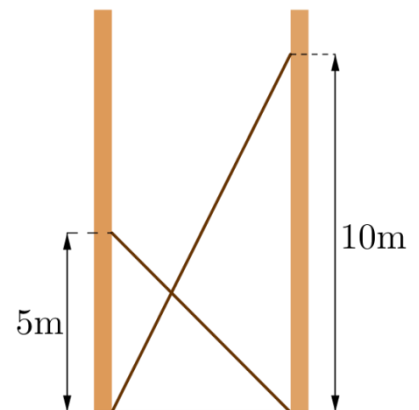
The picture shows two ladders propped against facing walls. The end of the first ladder is 5m above the base of the second wall. The second ladder is 5m above the base of the first wall.



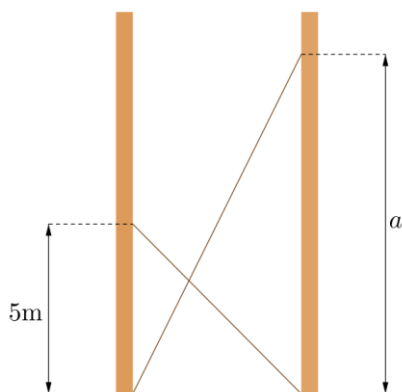
Can you work out at what height the ladders cross?

Are you surprised that we don't need to know the distance between the two walls?

Suppose now the first ladder is 10m above the base of the second wall, with the second ladder remaining as before.



Can you work out at what height the ladders cross now?



Suppose the first ladder meets the wall at a height of a metres, as in the diagram.

At what height do the ladders cross now?

Suppose the second ladder meets the wall at a height of b metres, as in the diagram.

At what height do the ladders cross now?

