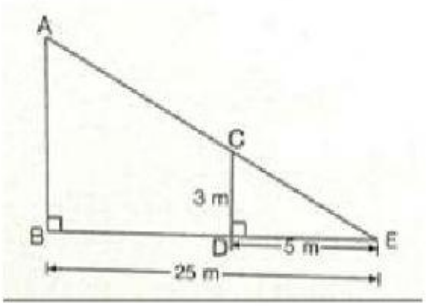
Name: _____No._____

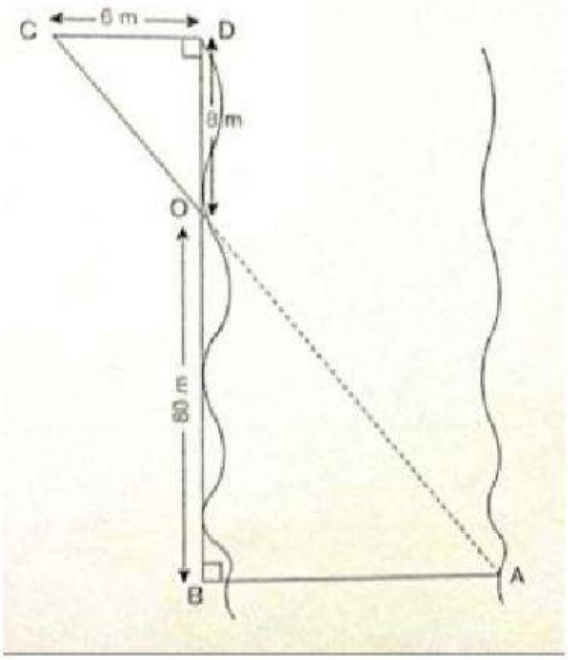
Worksheet 4.5 Word Problems Involving Similar Triangles

1. Kong sees an electricity post that casts a 25 metre shadow and a small 3 metre pillar that casts a 5 metre shadow in the same direction. Find the height of the electricity post.



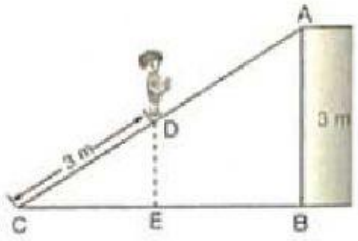
∴ the height of electric post is _____metres.

2. Find the width of a river using similar triangles. Given $\measuredangle ABO$ and $\measuredangle CDO$ are right angles, CD =6m , BO = 80m , and DO= 8m . You are at point C, looking along $\overline{CA}$ through point). Given $\overline{CD} \parallel \overline{BA}$, find the width of the river.



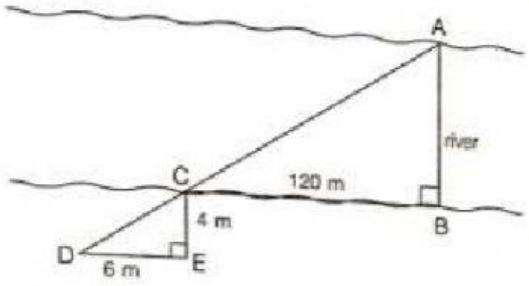
∴ the width of the river is _____metres.

3. Pong carries a box up a slope that is 6m long from the front of a high building that is 3 metres high. If he walks up 3 more metres, how high will he be from the ground?



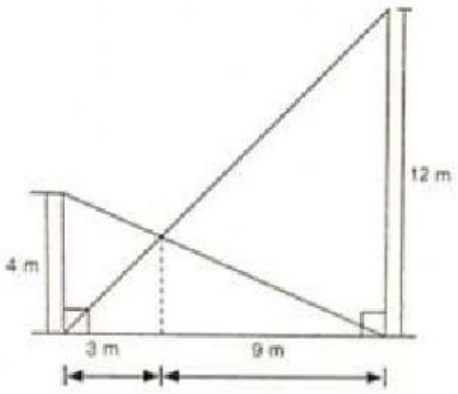
∴ Pong is _____ metres high from the ground.

4. Tong would like to measure the width of a river in the village. If $\overline{AB}$ is the width of the width of the river, use similar triangles to find the width of the river from A to B.



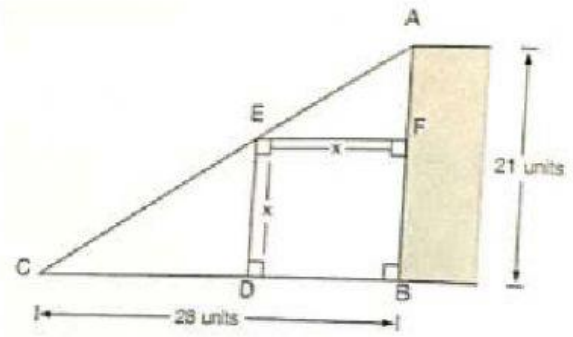
∴ the width of the river is _____metres.

5. There are two pillars, one 4 metres high, and the other one is 12 metres high. They are tied together with tires as shown. How high is the intersection of the wires above the ground?



∴ the intersection of the two wires is _____metres high above the ground.

6. From the figure, find the value of x.



∴x = _____units

7. A fireman uses a ladder that is 6 metres long to climb up to a window to help a child trapped in a building, which is 5 metres above the ground. After climbing 3 metres up the ladder, he falls down. How high does he fall?

∴ a fireman falls down _____metres.