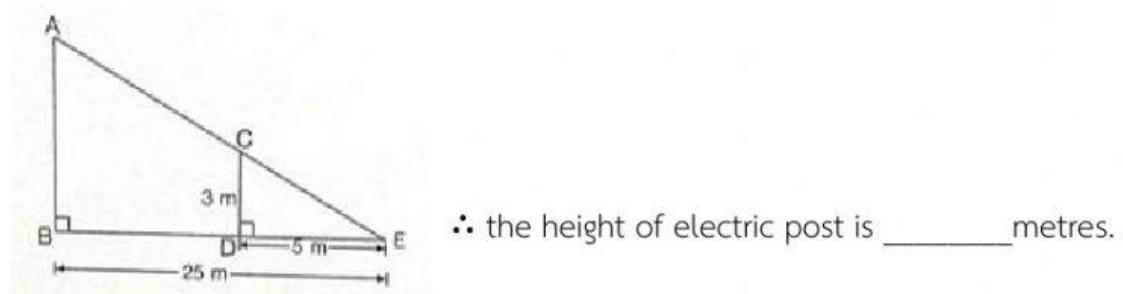


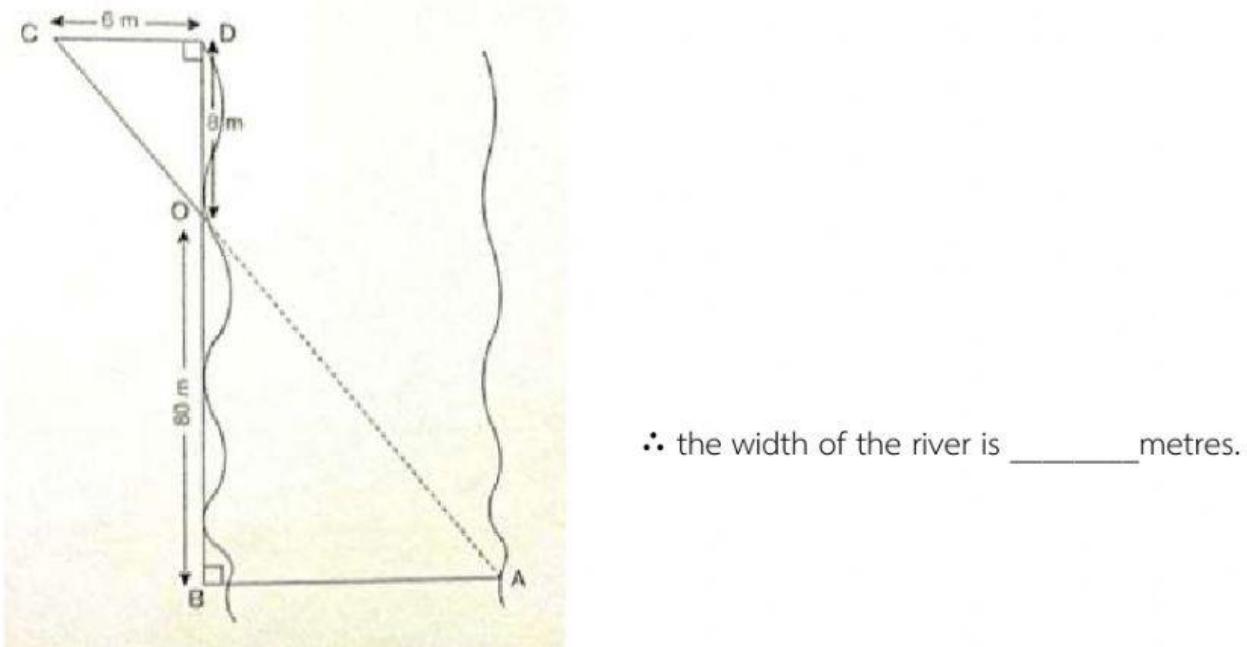
Name: \_\_\_\_\_ No. \_\_\_\_\_

### Worksheet 4.5 Word Problems Involving Similar Triangles

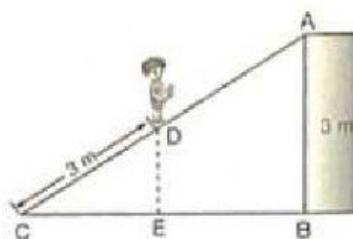
1. Kong sees an electricity post that casts a 25 metre shadow and a small 3 metre pillar that casts a 5 metre shadow in the same direction. Find the height of the electricity post.



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

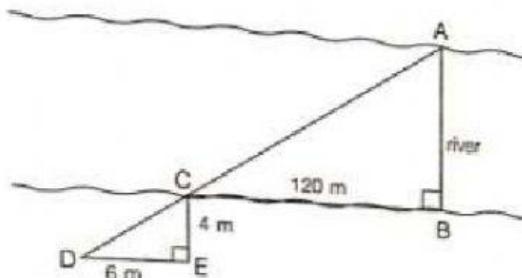


3. Pong carries a box up a slope that is 6m long from the front of a high building that is 3 metres high. If he walks up 3 more metres, how high will he be from the ground?



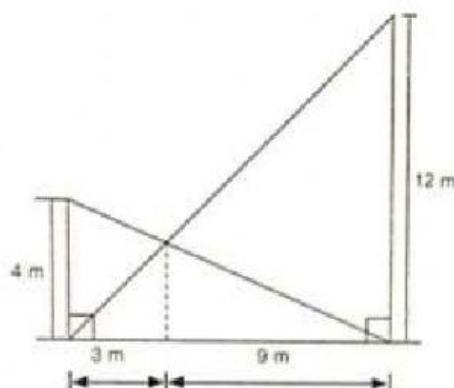
$\therefore$  Pong is \_\_\_\_\_ metres high from the ground.

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.



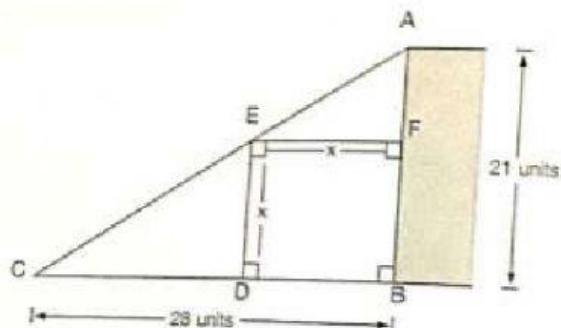
$\therefore$  the width of the river is \_\_\_\_\_ metres.

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?



$\therefore$  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?