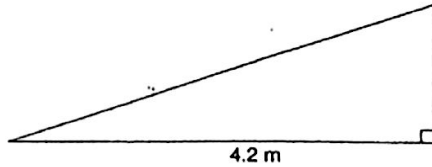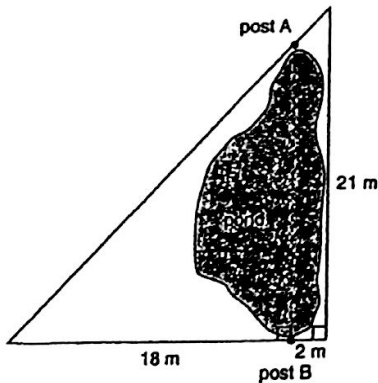Name _____

Apply Similar Triangles

1. A tall building casts a shadow 9.2 m long. At the same time, a 1.8-m tall person casts a shadow 0.4 m long. How tall is the building?
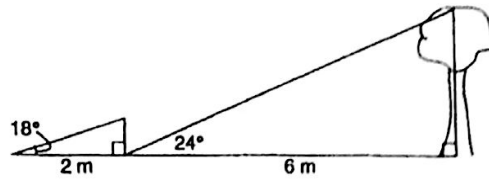
2. A loading ramp is built so that it rises 20 cm vertically for each metre horizontally. What is the vertical height of the ramp shown in the diagram?

4.2 m

3. A park designer placed survey posts as shown in the diagram below. Measurements were made as indicated. How far apart are the posts?

post A

21 m

18 m   2 m
         post B

4. Explain why similar triangles cannot be used to measure the height of the tree in the diagram.

18°   24°
   2 m   6 m

5.

Bill wanted to find the width of a small river. To do this he constructed the following two similar triangles, ABC and DEC. How wide was the river according to his calculations?

River

x

B   10m   C   3m E
         5m
         D