

Ch. 6 Practice Test

(30 marks)

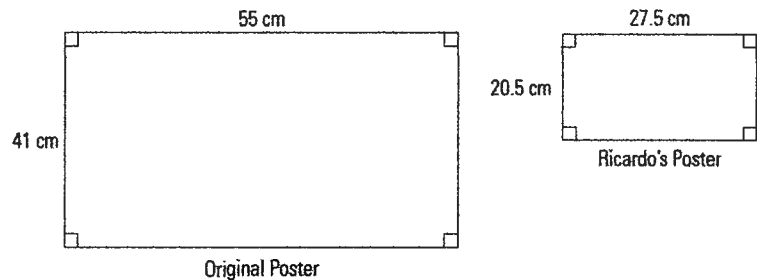
- In order to show two figures are similar you must prove...?
- The scale on a map is 1cm:3km, how many cm on the map would 36 km be?
- A picture of Carla's pen in a magazine is 21 cm long, the real pen is 7 cm, what is the scale factor used to create the picture?

- In the picture below, what is the scale factor used to create Ricardo's poster?

a) 2

b) $\frac{1}{2}$ c) $\frac{3}{4}$

d) 4



- Picture two similar figures. One of the figures is 2 times the size of the other. If you create a similar shape that is 2 times as big, the angles will be...

a) doubled

b) tripled

c) the same

d) halved

- Solve the following: $\frac{3}{5} = \frac{x}{35}$

- What would the dimensions of this picture be if it was enlarged by a scale factor of 1.75?



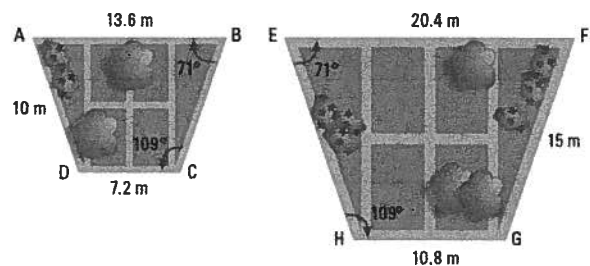
- In the diagram, which side corresponds to side DC?

a) AD

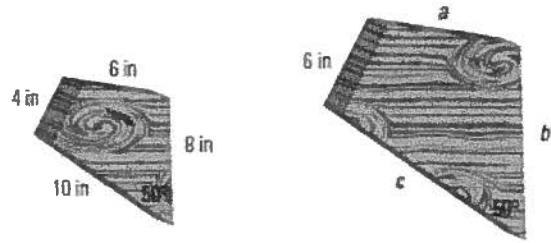
b) HG

c) FG

d) BC

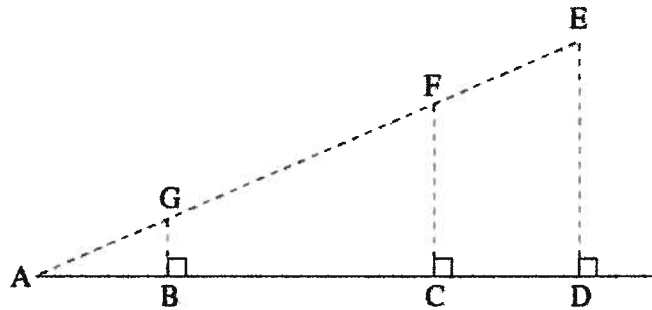


9. Determine what scale factor was used to create the larger piece.



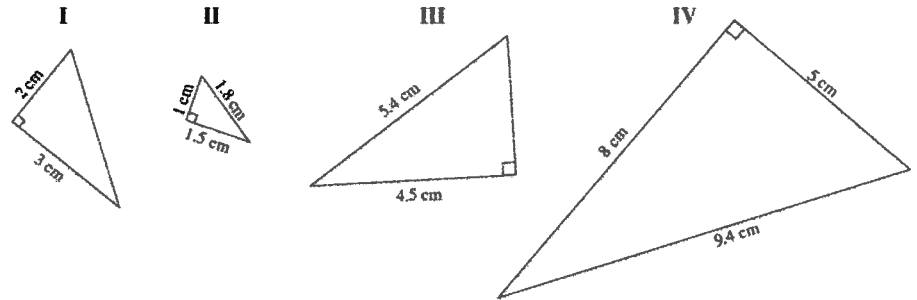
10. Which statement correctly expresses a similarity between two triangles in the diagram below?

- a) $\triangle AGB \sim \triangle CED$
- b) $\triangle AGB \sim \triangle ACF$
- c) $\triangle ACF \sim \triangle ADE$
- d) $\triangle AFC \sim \triangle ADE$



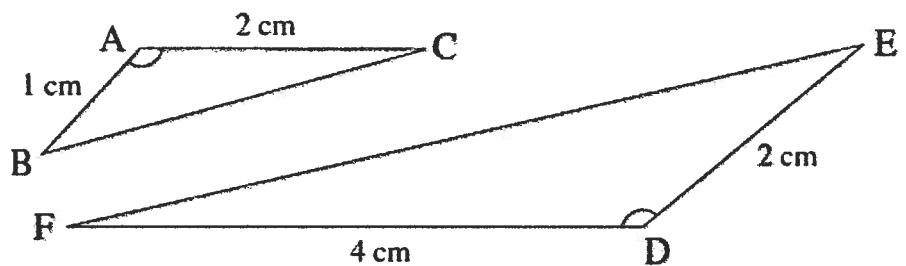
11. Which of the right triangles below are similar?

- a) I and II only
- b) II and IV only
- c) I, II and III only
- d) II, III and IV only

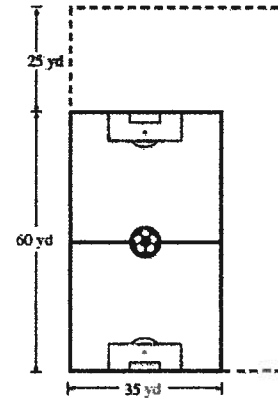


12. Which property proves that $\triangle ABC$ is similar to $\triangle DEF$?

- A. $\frac{AB}{DE} = \frac{AC}{DF}$
- B. $AC = ED$
- C. $\angle A = \angle D$
- D. $\frac{AC}{BC} = \frac{DE}{EF}$



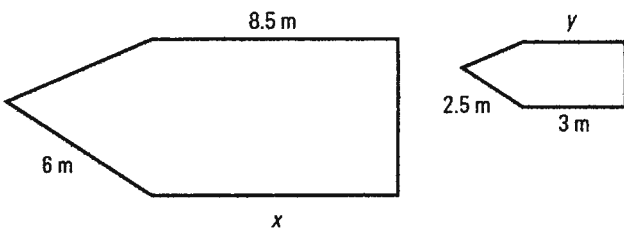
13. A small soccer field is to be enlarged, though its shape will stay the same. What will be the area of the new field?



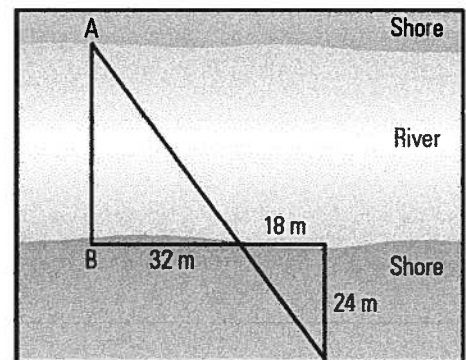
*Part B—short answer section; please show **all your work** for full marks*

1. The lengths of the sides of a pentagon (5 sided shape) are 2", 6", 10", 14", and 24". Use scale factors to calculate the lengths of the sides of a similar pentagon if the shortest side is 5". (2 marks)

2. Given that the two figures shown are similar, determine the values of x and y . (4 marks)

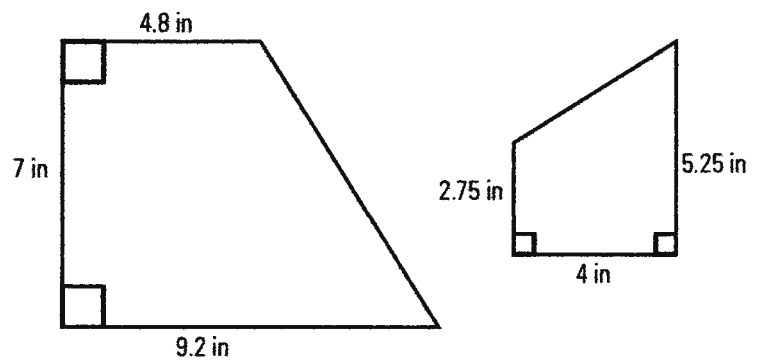


3. To determine the distance across a river (distance AB), Lila took the following measurements. Assuming the two triangles in the diagram are similar, how wide is the river? (2 marks)



4. If a man casts a shadow that is 3.8 m long at the same time that an 8-m flagpole casts a shadow that is 15 m long, how tall is the man? (2 marks)

5. Amin cut out two blocks of wood as indicated. Are the two blocks similar in shape? Round your final calculations to two decimal places. (2 marks)



6. Joanne knitted a blanket that measures 174 cm by 230 cm. Her sister asked Joanne to make a matching one for her son. If Joanne wants to make a similar blanket using a scale factor of 0.55, what will its dimensions be? Include a diagram (3 marks)

7. In the following diagram, AB is parallel to ED, AB is 8 m, AC is 12 m, and CE is 7 m. Calculate ED to one decimal place. (2 marks)

