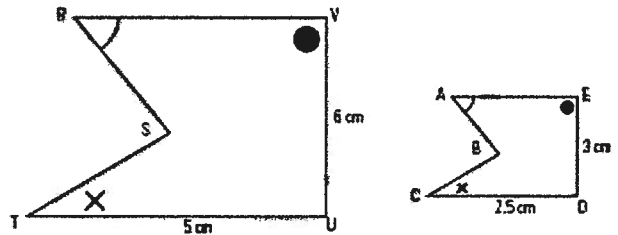




5. Theresa folds origami paper to make stacked boxes. The outer box is 12 cm by 8 cm by 4 cm. Theresa would like to make two smaller, similar boxes, each scaled down by 5% of the previous box. What are the dimensions of the two smaller boxes?

6. Are the two pentagons shown below similar? If so, explain how you know. If not, explain what you would need to know. (Angles marked with the same symbol are equal.)



7. The scale on a map is 2.5 cm: 500 m.

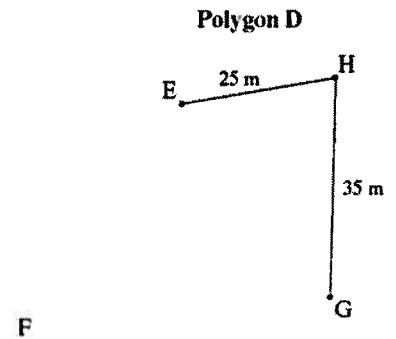
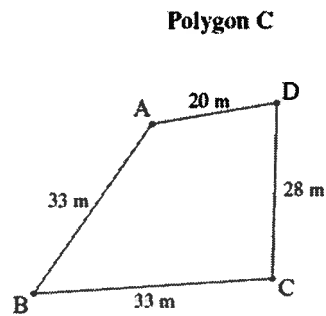
a) What distance is represented by a 12.5-cm segment on the map?

b) How long would a segment on the map be if it represented 1.5 km?

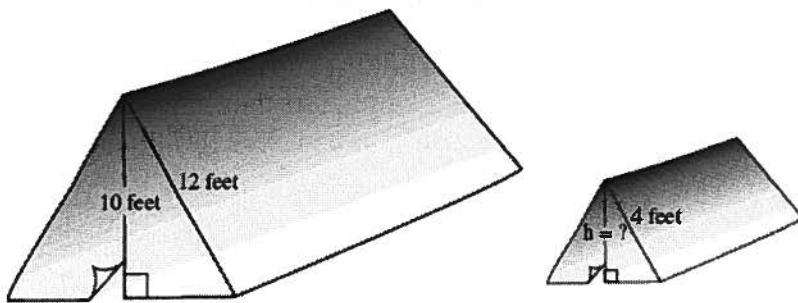
8. Show whether a rectangular prism that is 6m X 10 m X 8m is similar to one that is 4m X 7m X 5m.

9. While he was at the pet food store, Jeremy saw three different sized dog mats. They measured 36 inches by 28 inches, 27 inches by 21 inches, and 24 inches by 18 inches. Are all the mats similar? Show your calculations.

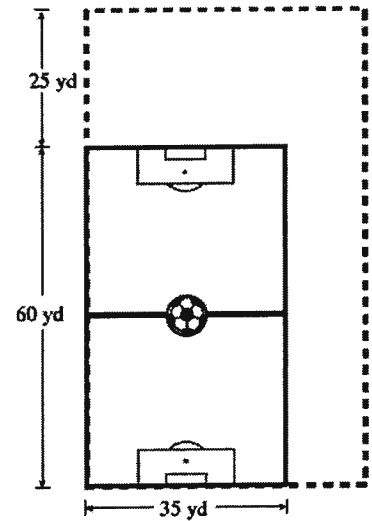
10. Gina drew a scale representation of a field (see Polygon C). For instance, she drew a line 2.2 cm to represent the actual measure (20 m) of this side (AD). Gina needs to complete the drawing of Polygon D so that both polygons are similar.



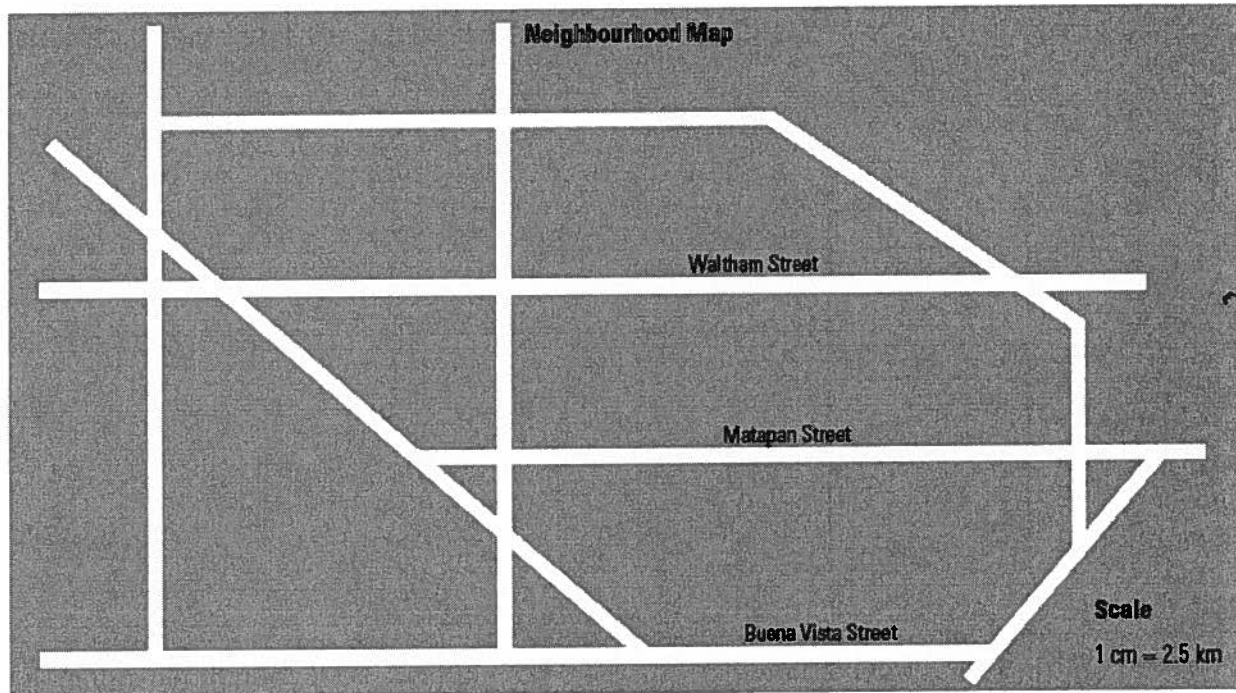
11. The two tents below are similar. What is the height of the smaller tent.



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



13. The scale on the neighborhood map on the next page shows that 1 cm on the map represents an actual distance of 2.5 km.



a. On the map, Waltham Street has a length of 14 cm. Using the scale, what would be the length of the actual street?

b. Matapan Street has an actual length of 25 km. Show your work to find the right length of the street on the map. Then use a ruler to see if your calculation is correct.