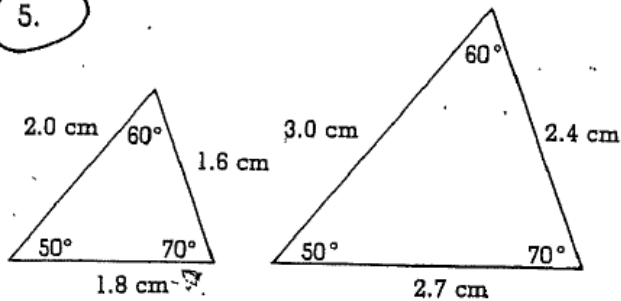


exercises

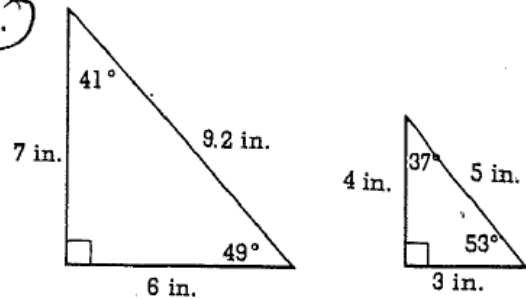
The numbers on this worksheet keep changing, because the problems are copied from various places.

Tell whether or not the figures in each pair are similar.

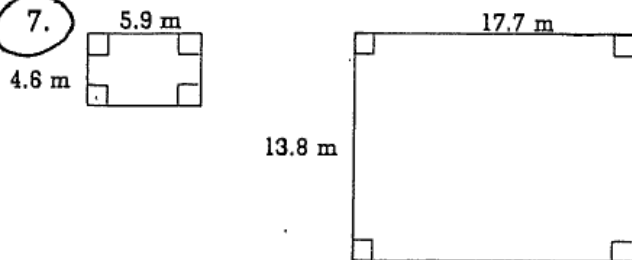
5.



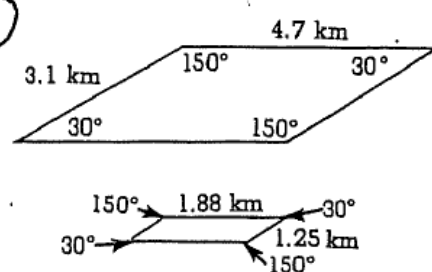
6.



7.



8.



Written For each of the following, write yes or no. Then, explain your answer.

1. All equilateral triangles are similar.
2. All isosceles triangles are similar.
3. All rectangles are similar.
4. All regular hexagons are similar.
5. All rhombuses are similar.
6. Congruent triangles are similar.
7. All trapezoids are similar.
8. All parallelograms are similar.
9. Similar quadrilaterals are congruent.
10. Congruent quadrilaterals are similar.

1. $\frac{11}{12} = \frac{x}{24}$

3. $\frac{t}{18} = \frac{5}{6}$

6. $\frac{7}{12} = \frac{9.8}{m}$

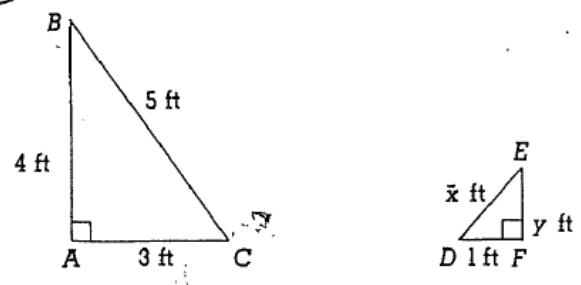
8. $\frac{7.29}{a} = \frac{27}{9}$

9. $\frac{x}{30-x} = \frac{2}{3}$

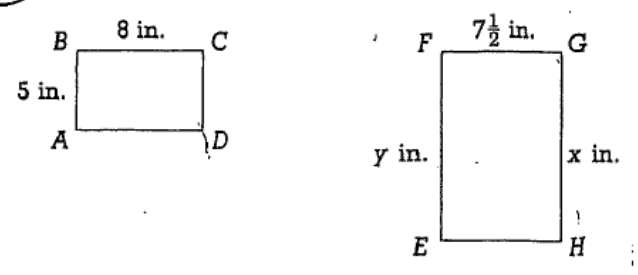
11. $\frac{3-n}{n+1} = \frac{2}{1}$

For each of the following, find x .

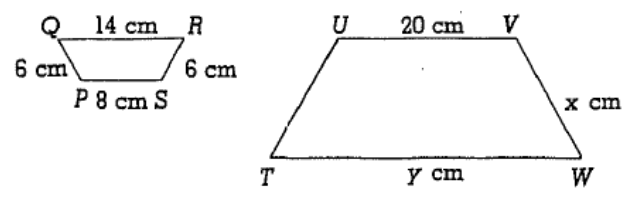
11. $\triangle ABC \sim \triangle FED$



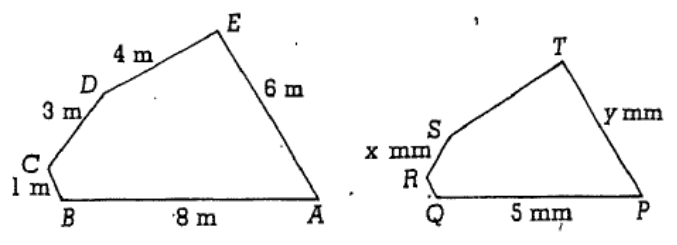
12. $\square ABCD \sim \square FGHE$



13. trapezoid PQRS \sim trapezoid VWTU



14. pentagon ABCDE \sim pentagon PQRST



15-18. In problems 11-14, find y .

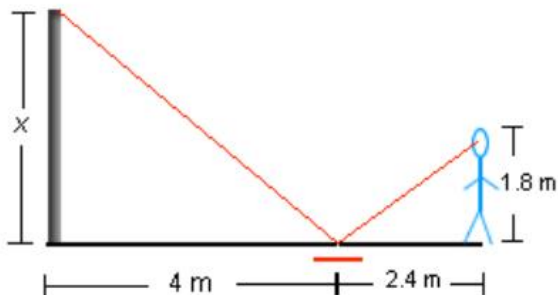
Solve each problem.

- 23) Figures in a scale drawing are similar to the actual figures. Suppose the side of a pentagon that is 12 m long corresponds to a side on a scale drawing 3 cm long. Find the length of a side that measures 2 cm on the scale drawing.

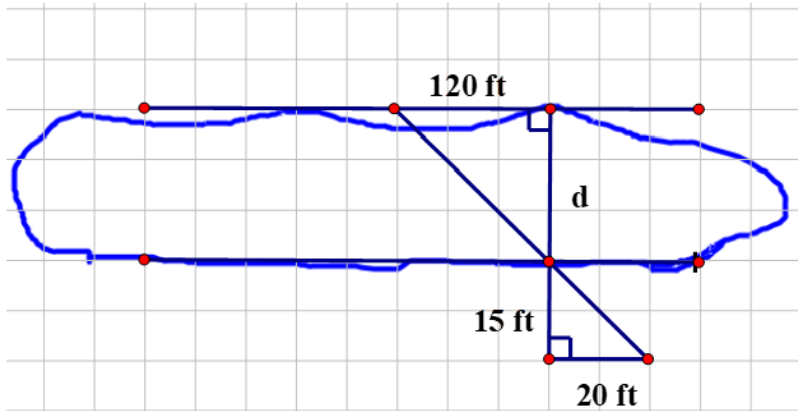


- 24) The figures seen in electron microscope photographs are similar to the actual figures. Suppose the length of a cell that is 2.4 cm in a photograph corresponds to an actual cell 3.1 microns long. Find the length of a cell that is 0.2 cm in the photograph.

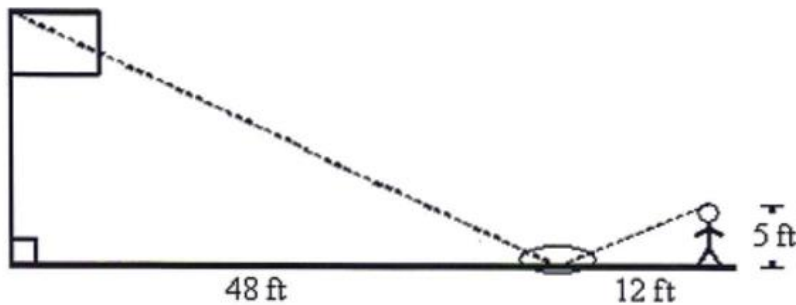
1. A statue, honoring Kobe Bryant, can be found in Los Angeles near the Staples Center. Use the information below to determine the unknown height of the statue.



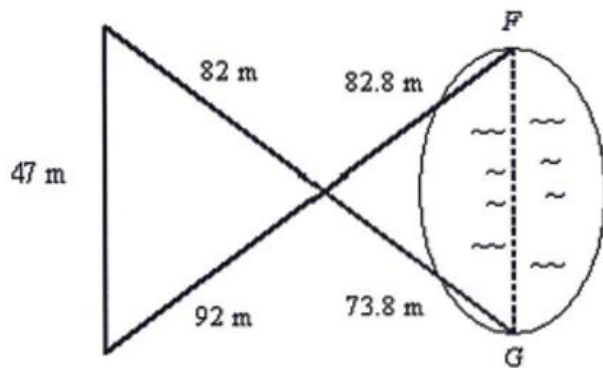
4. To find the distance d across a lake, you locate the points as shown. Find d . Round your answer to the nearest tenth.



7. Michele wanted to measure the height of her school's flagpole. She placed a mirror on the ground 48 feet from the flagpole, then walked backwards until she was able to see the top of the pole in the mirror. Her eyes were 5 feet above the ground and she was 12 feet from the mirror. Using similar triangles, find the height of the flagpole to the nearest tenth of a foot.



- A. 20 ft B. 38.4 ft C. 55 ft D. 25 ft
8. Campsites F and G are on opposite sides of a lake. A survey crew made the measurements shown on the diagram. What is the distance between the two campsites? The diagram is not to scale.



- A. 42.3 m B. 47.4 m C. 73.8 m D. 82.8 m