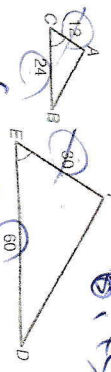


$\frac{24}{12} = \frac{60}{30}$
 $\frac{24}{12} = \frac{60}{30}$

1. Determine whether the triangles are similar. If so, write the similarity ratio and a similarity statement.

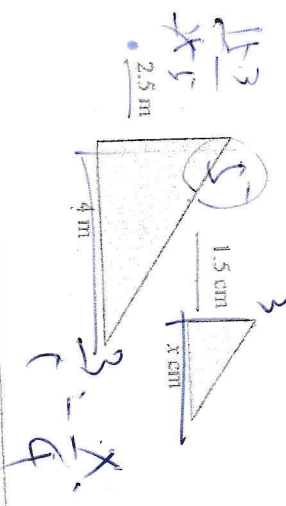


$\frac{24}{12} = \frac{60}{30}$
 $\frac{30}{12} = \frac{60}{24}$

2. A rectangular field has a length of 105 feet and a width of 60 feet. On a map of the field, the width was drawn as 4 inches. What measurement should represent the length?



3. A portion of a daycare has been set aside for toddlers under 2. The dimensions are shown. A scale drawing of the room is 5 cm tall. How wide is the scale drawing?



4. Give the definition of a dilation.

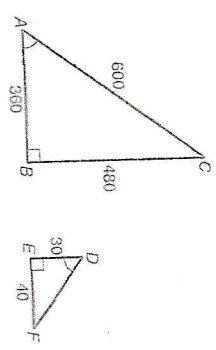
5. Apply the dilation $D: (x, y) \rightarrow (3x, 3y)$ to the polygon $A(4, 4), B(1, 1), C(6, 8)$. What are the coordinates of the image points?

6. Name the dilation and then the translation that was used to map $O(2, 5), P(6, 1), Q(0, -1), R(-1, 0)$ to $A(8, 14), B(16, 6), C(4, 2), D(2, 4)$.

7. Identify the similarity postulate or theorem that can be used to prove $\triangle ABE \sim \triangle CDE$.

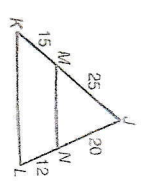


8. Find DF .



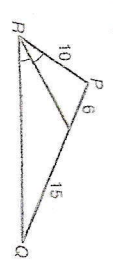
$DF = 50$

9. Write True or False. $\overline{MN} \parallel \overline{KL}$



True

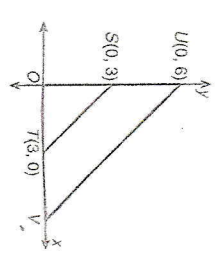
10. Find RQ .



11. Mentone, Indiana, claims to have the world's largest egg sculpture. A 6-foot-tall person standing next to the egg sculpture casts a shadow that is 2 feet long. If the egg casts a shadow that is 4 feet long, how tall is the sculpture?

12. A drawing of a garden uses a scale of 1 in : 3 ft. Find the length of the garden if the length on the drawing is 13 inches.

13. Given that $\triangle UOV$ is a dilation image of $\triangle SOT$, find the coordinates of V and the scale factor.



14. Given: $A(0, 0), B(0, 3), C(4, 0), D(0, 6)$ and $E(8, 0)$
 Prove: $\triangle ABC \sim \triangle ADE$

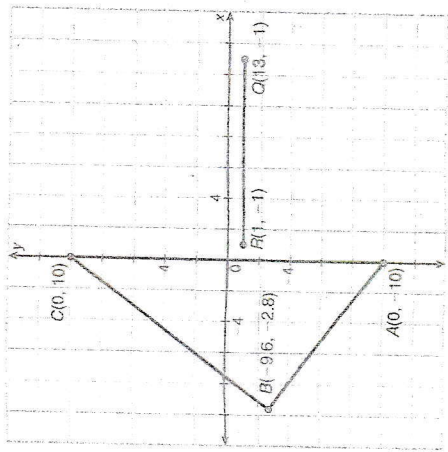
Performance Assessment

Demonstrate your knowledge by locating point P in $\triangle PQR$ so that $\triangle ABC \sim \triangle PQR$.

1. a. Find BC .
- b. What will be the length of the side corresponding to BC in $\triangle PQR$?

2. Write a similarity ratio for $\triangle ABC$ to $\triangle PQR$.

3. Is it possible to determine any angle measures in $\triangle ABC$? Explain.



4. Write one of the two possible coordinate pairs for P , and complete $\triangle PQR$ on the graph.

5. a. Locate X on $\overline{QR}$ so that $RX : XQ = 2 : 1$. Show X on the graph, and write the coordinate pair.

- b. Locate Y on PQ so that $PY : YQ = 2 : 1$. Draw XY on the graph, and write the coordinate pair for Y .

- c. Does $\triangle XY$ create a triangle similar to $\triangle PQR$? Explain.

6. Is $\triangle ABC \sim \triangle YQX$? Justify your answer.