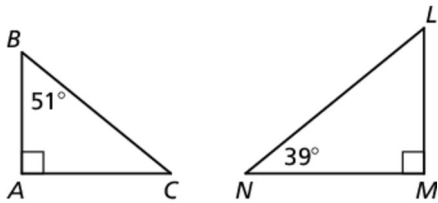


AA Similarity of Triangles

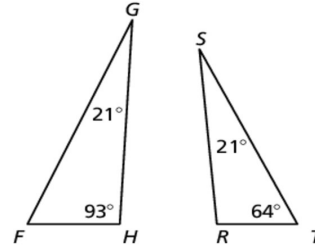
Practice and Problem Solving: A/B

For Problems 1 and 2, determine if the triangles are similar. If they are, give a reason and write a similarity statement.

1.

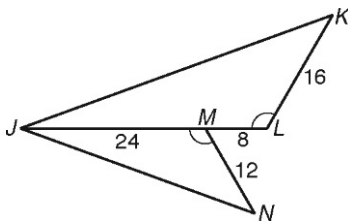


2.



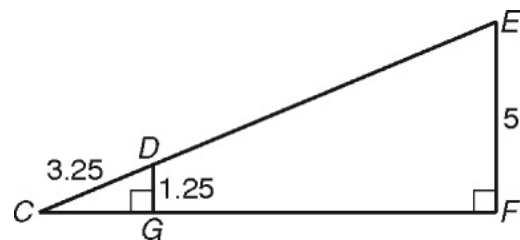
For Problem 3, give a reason that the triangles are similar.

3. $\triangle JLK$ and $\triangle JMN$

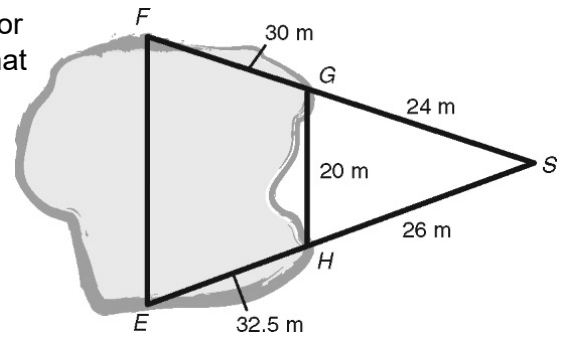


For Problem 4, explain why the triangles are similar and find the stated length.

4. DE

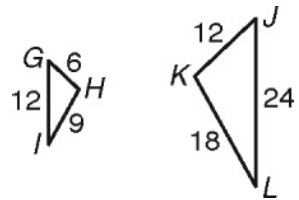


5. To measure the distance EF across the lake, a surveyor at S locates points E , F , G , and H as shown. Verify that the triangles are similar, and then find EF .

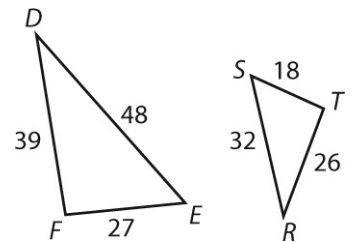


For Problems 6 and 7, find the ratio of the side lengths to show that the triangles are similar by the Side-Side-Side (SSS) Similarity Theorem.

6. $\frac{GH}{JK} = \frac{6}{12} = \frac{1}{2}$ $\frac{HI}{KL} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$ $\frac{GI}{JL} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

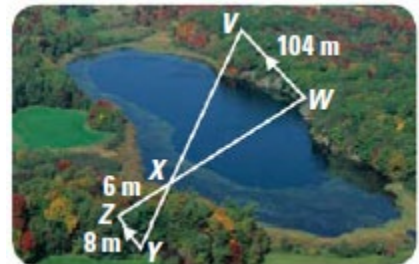


7. $\frac{DE}{RS} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$ $\frac{EF}{ST} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$ $\frac{DF}{RT} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$



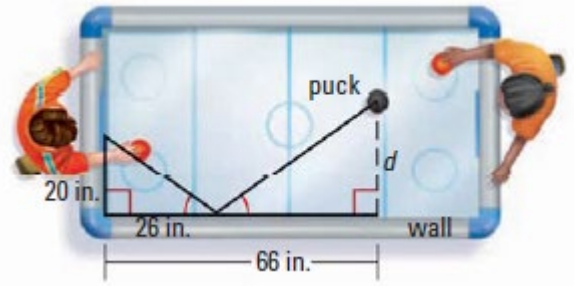
8. You can measure the width of the lake using a surveying technique, as shown in the diagram.

a. Find the width of the lake, WX .



b. If $XY = 10$ meters, find VX .

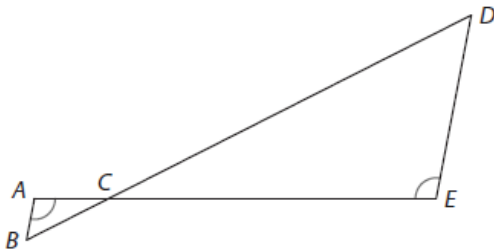
9. An air hockey player returns the puck to his opponent by bouncing the puck off the wall of the table as shown. From physics, the angles that the path of the puck makes with the wall are congruent. What is the distance d between the puck and the wall when the opponent returns it?



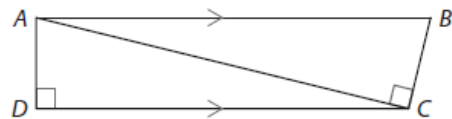
Homework Section

Determine whether the two triangles are similar. If they are similar, write the similarity statement.

5.

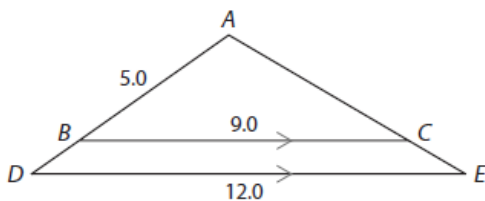


6.

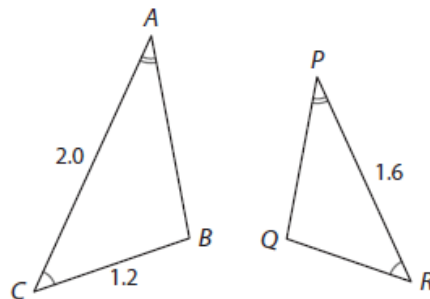


Explain how you know whether the triangles are similar. If possible, find the indicated length.

8. AD

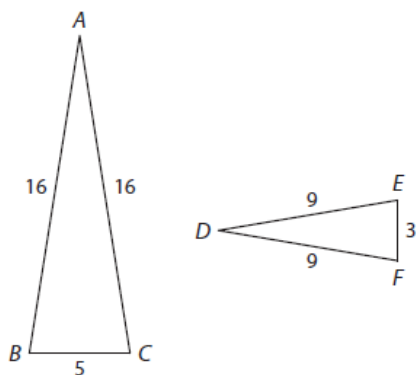


9. QR

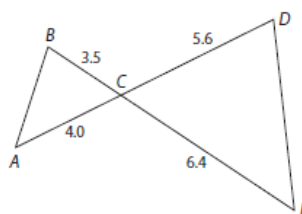


Show whether or not each pair of triangles are similar, if possible. Justify your answer, and write a similarity statement when the triangles are similar.

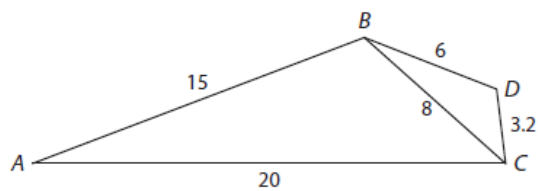
11.



12.



13.



14.

