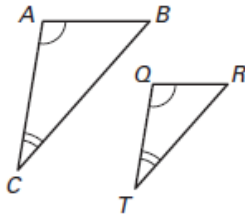
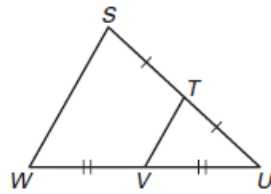


Determine whether the triangles are similar, not similar, or cannot be determined from the information given in the figures below.

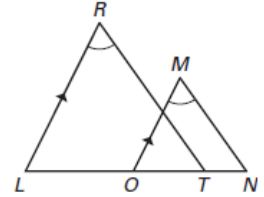
1.



2.

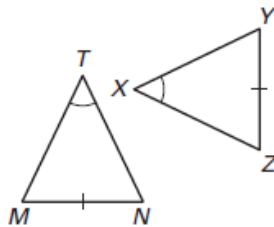


3.

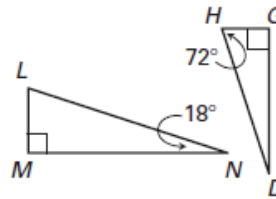


Determine whether the triangles can be proven similar. If they are similar, write a similarity statement. Explain your reasoning.

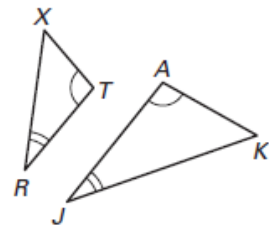
4.



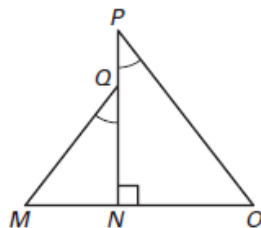
5.



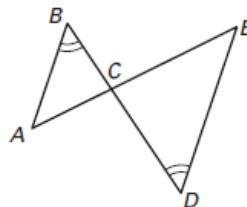
6.



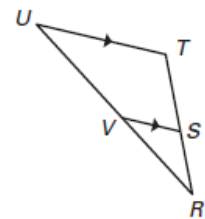
7.



8.

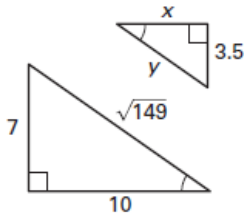


9.

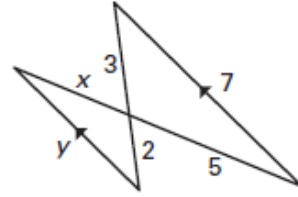


If possible, find the values of the variables.

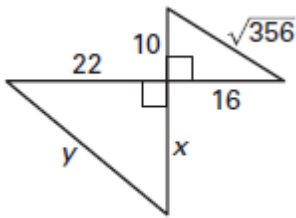
10.



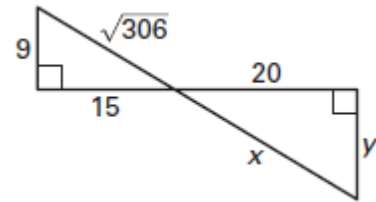
11.



12.



13.

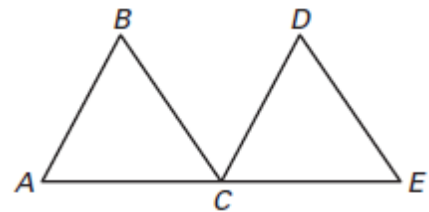


Decide whether enough information is given to prove that $\triangle ABC \sim \triangle CDE$ in the figure below.

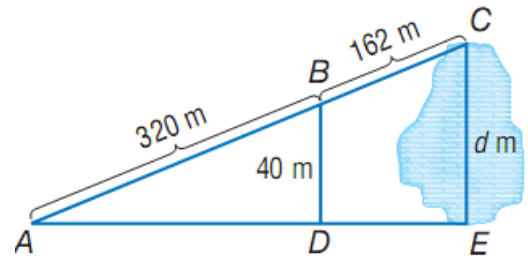
14. GIVEN : $\angle BAC \cong \angle DCE$

15. GIVEN : $\overline{AB} \parallel \overline{CD}, \overline{BC} \parallel \overline{DE}$

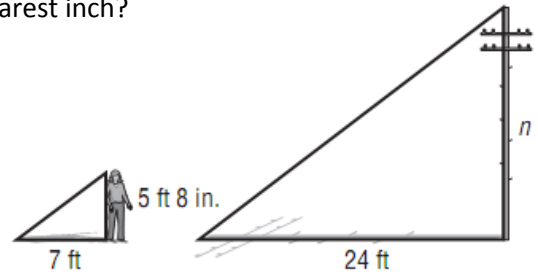
16. GIVEN : $\overline{AB} \parallel \overline{CD}$



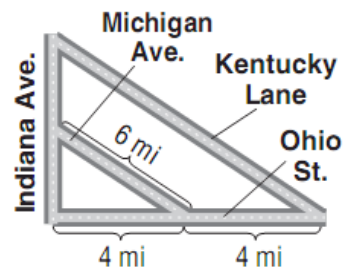
17. In the figure, $\overline{BD} \parallel \overline{CE}$. Ramon wants to know the distance across the lake.



18. A telephone pole casts a 24-foot shadow. Belinda, who is 5 feet 8 inches tall, casts a 7-foot shadow. What is the height of the telephone in feet and inches to the nearest inch?



19. Find the length of Kentucky Lane in the diagram, given that Kentucky Lane is parallel to Michigan Avenue.



Answer Key :

1) Similar

2) Cannot be determined

3) Similar

4) Not enough information

5) $\triangle LMN \sim \triangle HGD$; both are 18° - 72° - 90°

6) $\triangle XTR \sim \triangle KAJ$ by AA Similarity Postulate

7) $\triangle QNM \sim \triangle PNO$ by AA Similarity Postulate

8) $\triangle ABC \sim \triangle EDC$; VAT so AA Similarity applies

9) $\triangle RSV \sim \triangle RTU$; $\angle R \cong \angle R$ and there are two pairs of corresponding angles

10) $x = 5, y = \frac{\sqrt{149}}{2}$

11) $x = \frac{10}{3}, y = \frac{14}{3}$

12) Not possible, can't be sure the triangles are similar

13) $x = \frac{\sqrt{34}}{4}, y = 12$

14) No

15) Yes

16) Yes

17) 60.25 m

18) 19 ft 5 inches

19) 12 miles