

Unit 6- Worksheet #4: Prove Triangles Similar by AA, SSS and SAS

Use the diagram to complete the statement.

1. $\triangle ABC \sim$ _____

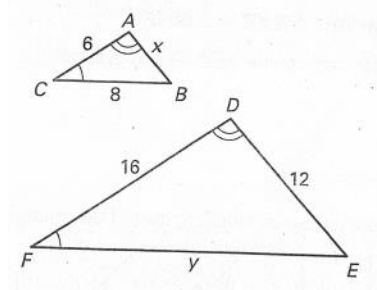
2. $\frac{AB}{EF} = \frac{\quad}{\quad} = \frac{CA}{\quad}$

3. $\angle B \cong$ _____

4. $\frac{\quad}{12} = \frac{8}{\quad}$

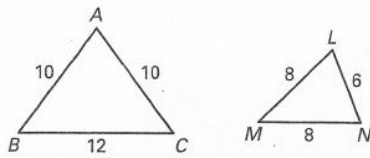
5. $x =$ _____

6. $y =$ _____

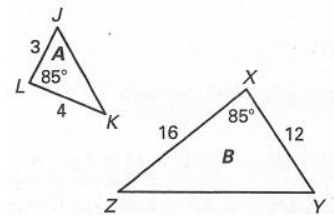


Determine whether the triangles are similar and justify your answer (with AA, SSS, SAS or why they are not). If they are similar, write a similarity statement.

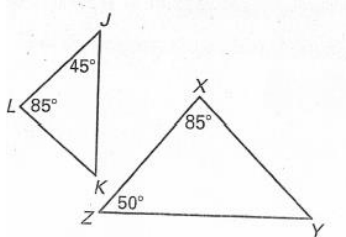
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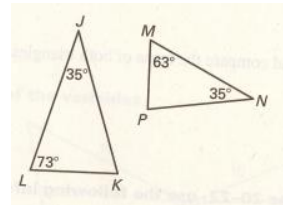
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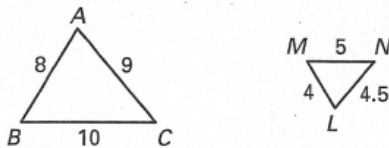
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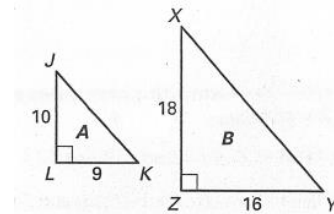
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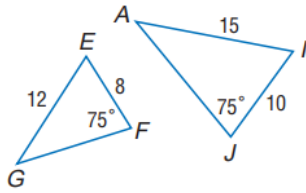
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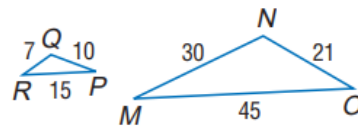
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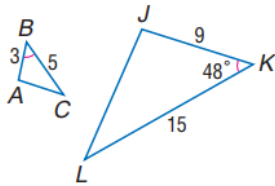
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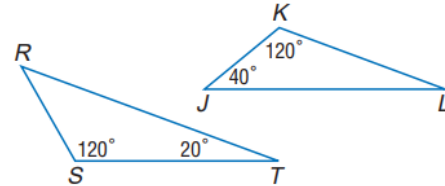
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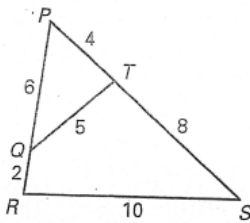
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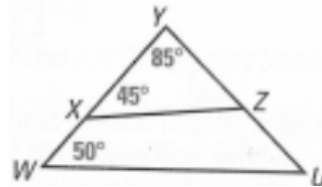
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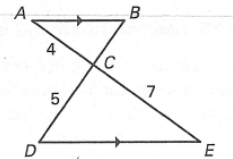
17.



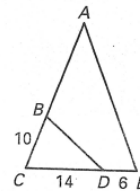
18.



19. $\triangle ACB \sim \triangle ECD$ Find the length of \overline{BC}



20. $\triangle ACE \sim \triangle DCB$. Find the length \overline{AB}



Sketch the triangle using the given description. Explain whether the two triangles can be similar.

21. The side lengths $\triangle ABC$ are 8in, 10in and 14in.
The side lengths $\triangle DEF$ are 16in, 20in and 26in.

22. In $\triangle ABC$, $AB = 15$, $BC = 24$ and $m\angle B = 38^\circ$
In $\triangle DEF$, $DE = 5$, $EF = 8$ and $m\angle E = 38^\circ$