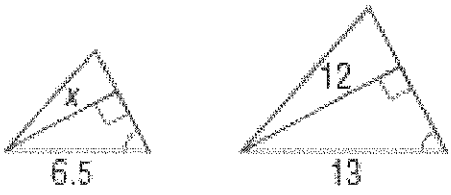
Parts of Similar Triangles

Name_____

Worksheet

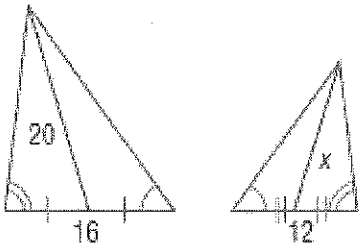
For #1-3, find x. Show all work.

1.



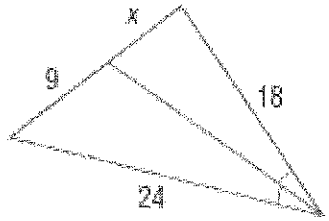
x = _____

2.



x = _____

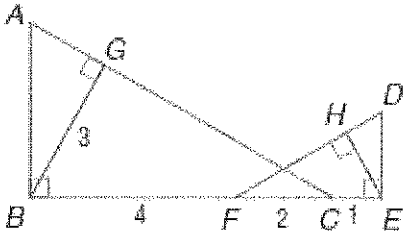
3.



x = _____

4. Find EH if $\Delta ABC \sim \Delta DEF$, $\overline{BG}$ is an altitude of ΔABC, $\overline{EH}$ is an altitude of ΔDEF, $BG = 3$, $BF = 4$, $FC = 2$, and $CE = 1$. Show all work.

EH = _____

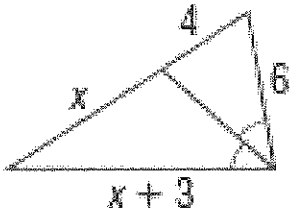


5. The distance from the film to the lens in a camera is 10 centimeters. The film image is 3 cm high. Tamika is 165 cm tall. How far should she be from the camera in order for the photographer to take a full-length picture? Draw and label the picture. Show all work.

Distance = _____

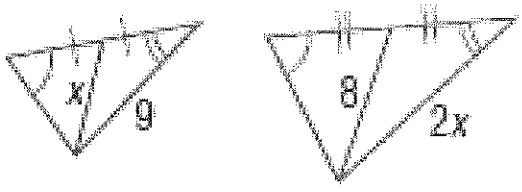
For #5-6, find x. Show all work.

6.



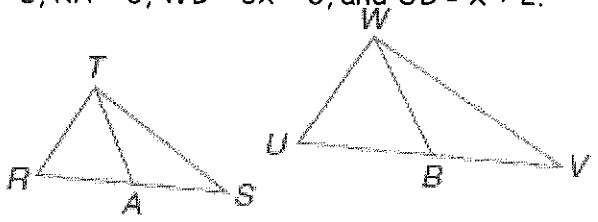
x = _____

7.



x = _____

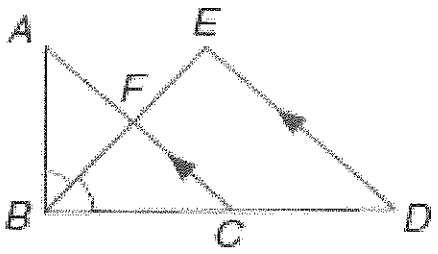
8. Find UB if $\Delta RST \sim \Delta UVW$, $\overline{TA}$ and $\overline{WB}$ are medians, TA = 8, RA = 3, WB = 3x - 6, and UB = x + 2. Show all work.



x = _____

UB = _____

9. Find CF and BD if $\overline{BF}$ bisects $\angle ABC$ and $\overline{AC} \parallel \overline{ED}$, BA = 6, BC = 7.5, AC = 9, and DE = 9. Separate and label the similar triangles. Show all work.

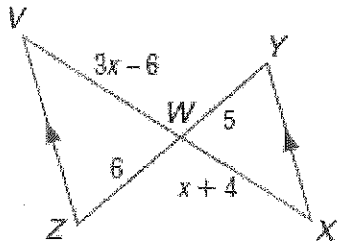


BD = _____

CF = _____

For #10-11, identify the similar triangles. Find x and the measures of the indicated sides. Show all work.

10.



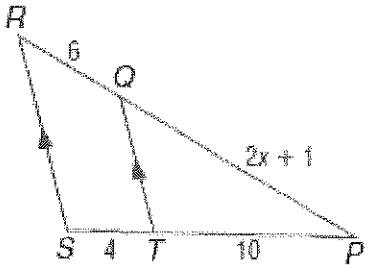
Similarity Statement = _____

x = _____

VW = _____

WX = _____

11.



Similarity Statement = _____

x = _____

PQ = _____

Name: _____ Date: _____ Block: _____

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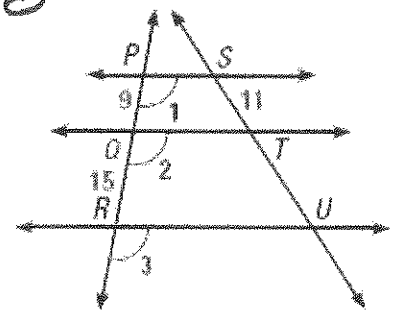
EX 5: What is the length of TU?



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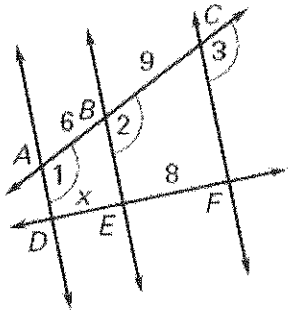
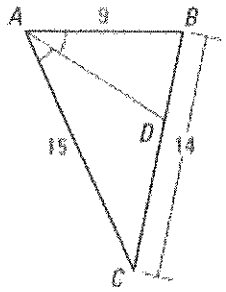
EX 6: What is x?



10

EX 7: Find the length of DC.



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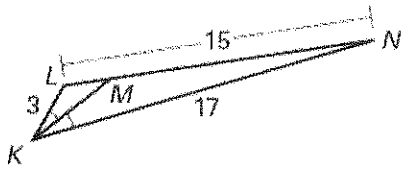
EX 8: Find the length of MN.



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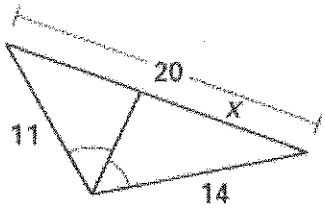
EX 9: Find the value of the x.



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EX 10: Find the value of the variables.