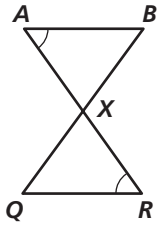
Name _____ Class _____ Date _____

Practice 7-3

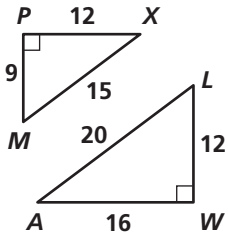
Proving Triangles Similar

Explain why the triangles are similar. Write a similarity statement for each pair.

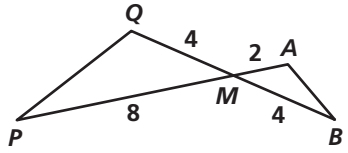
1.



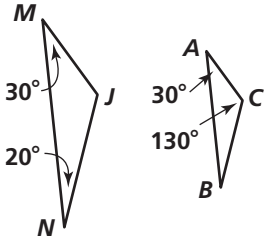
2.



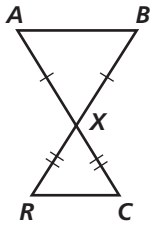
3.



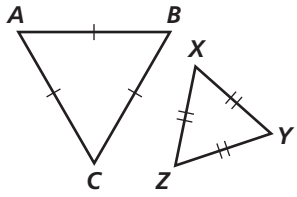
4.



5.

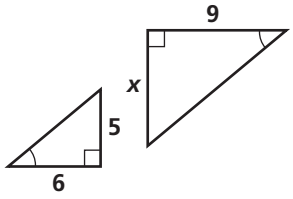


6.

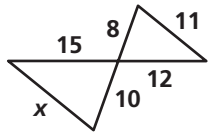


Algebra **Find the value of *x*.**

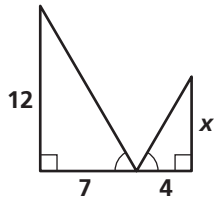
7.



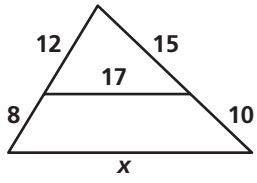
8.



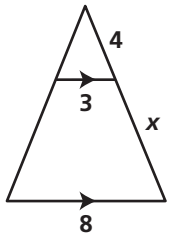
9.



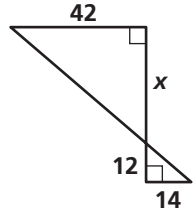
10.



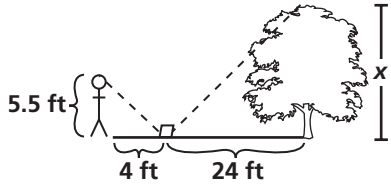
11.



12.

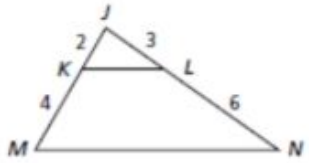


13. Natasha places a mirror on the ground 24 ft from the base of an oak tree. She walks backward until she can see the top of the tree in the middle of the mirror. At that point, Natasha's eyes are 5.5 ft above the ground, and her feet are 4 ft from the image in the mirror. Find the height of the oak tree.



Examples: Determine if the triangles are similar. If so, tell why and write the similarity statement and similarity ratio.

1.

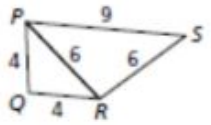


Similar : Y or N Why:_____

Similarity Statement :_____~_____

Similarity Ratio :_____

2.

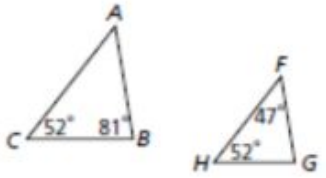


Similar : Y or N Why:_____

Similarity Statement :_____~_____

Similarity Ratio :_____

3.

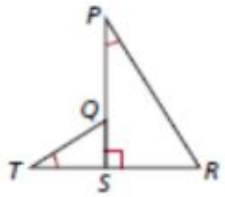


Similar : Y or N Why:_____

Similarity Statement :_____~_____

Similarity Ratio :_____

4.

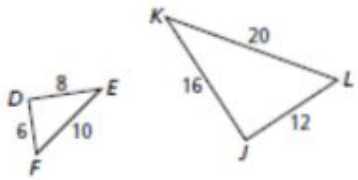


Similar : Y or N Why:_____

Similarity Statement :_____~_____

Similarity Ratio :_____

5.

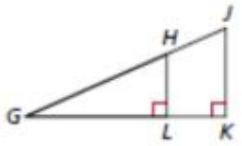


Similar : Y or N Why:_____

Similarity Statement :_____~_____

Similarity Ratio :_____

6.

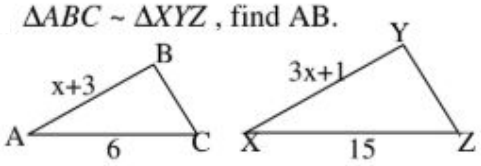


Similar : Y or N Why:_____

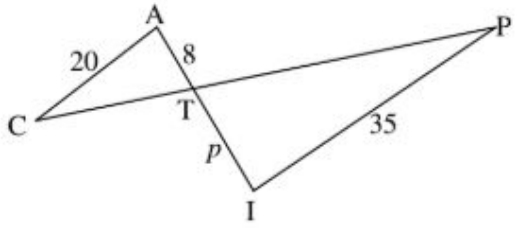
Similarity Statement :_____~_____

Similarity Ratio :_____

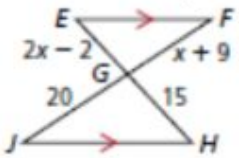
7. $\Delta ABC \sim \Delta XYZ$, find AB.



8. If ΔCAT is similar to ΔPIT , what is the length of p?



9. $\Delta EFG \sim \Delta HJG$, find FG.



10. If ΔCAT is similar to ΔPIT , what is the length of TP?