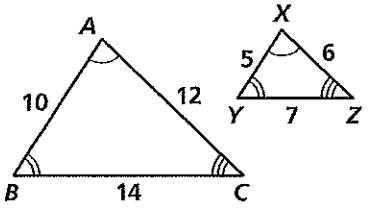
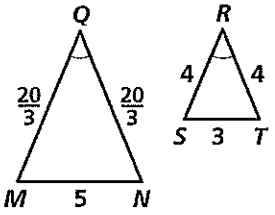
Name _____ Class _____ Date _____

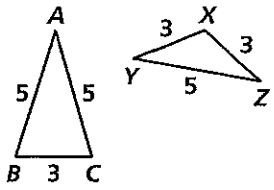
Practice 8-2

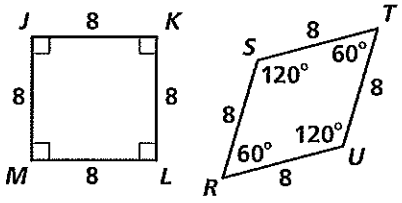
Similar Polygons

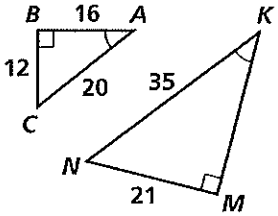
Are the polygons similar? If they are, write a similarity statement, and give the similarity ratio. If they are not, explain.

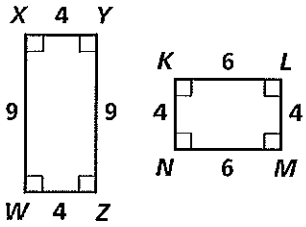
1. 

2. 

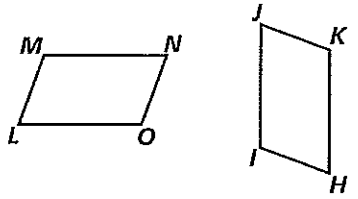
3. 

4. 

5. 

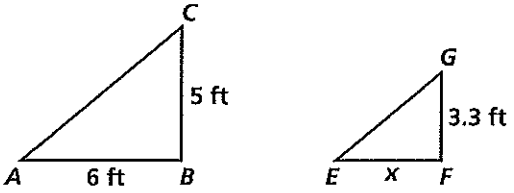
6. 

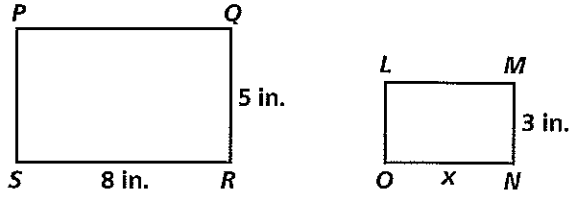
LMNO ~ *HIJK*. **Complete the proportions and congruence statements.**

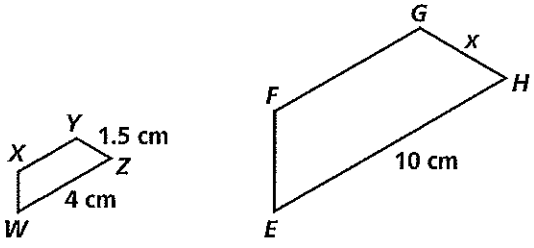


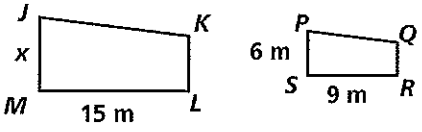
7. $\angle M \cong ?$
8. $\angle K \cong ?$
9. $\angle N \cong ?$
10. $\frac{MN}{IJ} = \frac{?}{JK}$
11. $\frac{HK}{?} = \frac{HI}{LM}$
12. $\frac{IJ}{MN} = \frac{HK}{?}$

Algebra **The polygons are similar. Find the values of the variables.**

13. 

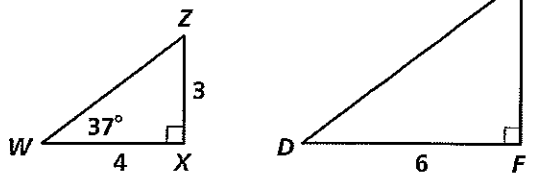
14. 

15. 

16. 

$\triangle WXZ \sim \triangle DFG$. **Use the diagram to find the following.**

17. the similarity ratio of $\triangle WXZ$ and $\triangle DFG$
18. $m\angle Z$
19. DG
20. GF
21. $m\angle G$
22. $m\angle D$
23. WZ

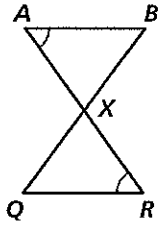


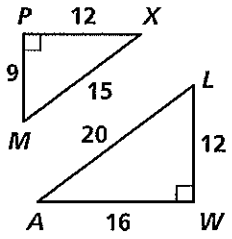
Name _____ Class _____ Date _____

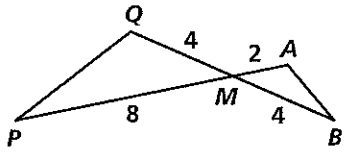
Practice 8-3

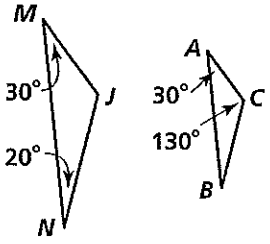
Proving Triangles Similar

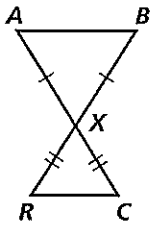
Explain why the triangles are similar. Write a similarity statement for each pair.

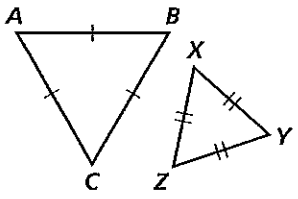
1. 

2. 

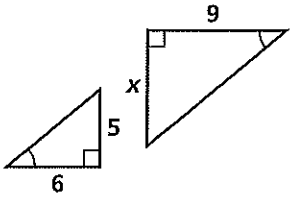
3. 

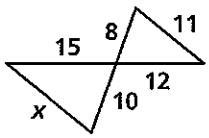
4. 

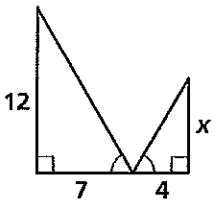
5. 

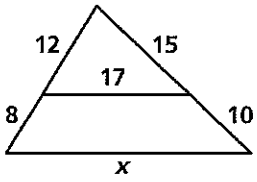
6. 

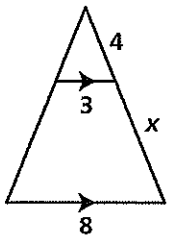
Algebra **Find the value of *x*.**

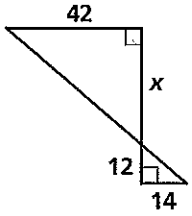
7. 

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.