Name _____ Class _____ Date _____

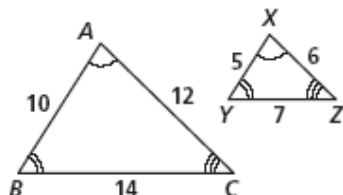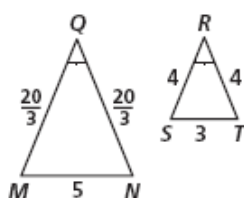# Practice 7-2..Similar Polygons

Are the polygons similar? If they are, write a similarity statement, and give the similarity ratio. If they are not, explain.
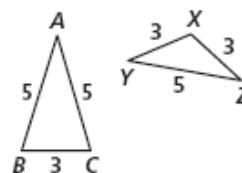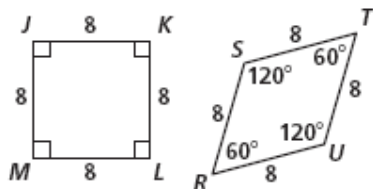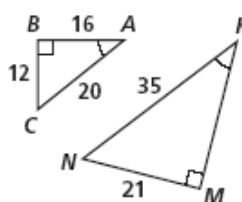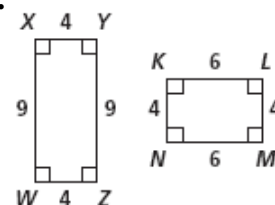
1.

2.

3.

4.

5.

6.
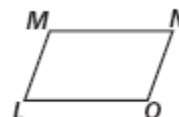

LMNO ~ HIJK. **Complete the proportions and congruence statements.**

7. $\angle M \cong$?   **8.** $\angle K \cong$?   **9.** $\angle N \cong$?
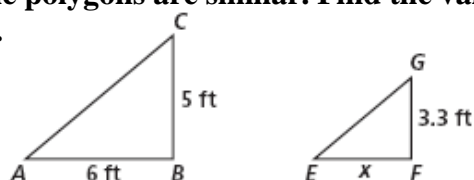

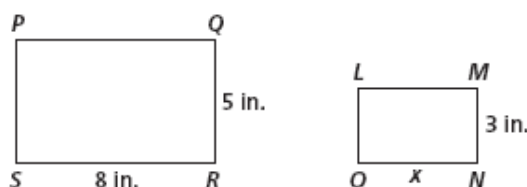**10.** $\dfrac{MN}{IJ} = \dfrac{?}{JK}$ **11.** $\dfrac{HK}{?} = \dfrac{HI}{LM}$ **12.** $\dfrac{IJ}{MN} = \dfrac{HK}{?}$

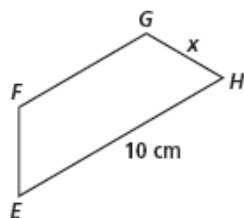**The polygons are similar. Find the values of the variables.**
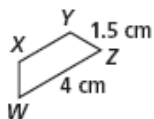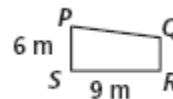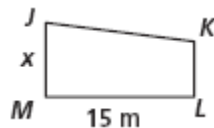
13.

14.

15.

16.

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

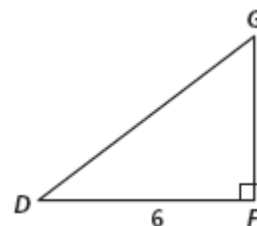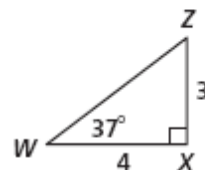**17.** the similarity ratio of $\triangle WXZ$ and $\triangle DFG$
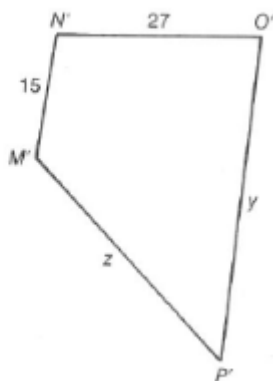

18. $m\angle Z$ **19.** DG **20.** GF

21. $m\angle G$ **22.** $m\angle D$ **23.** WZ

24. Quad. $MNOP \sim$ quad. $M`N`O`P`$. Find the scale factor of Quad. $MNOP$ to quad. $M`N`O`P`$ and the values of the variables.

Complete.

25. $\triangle ABC \sim \triangle DEF$. Their scale factor is 7:9. If the perimeter of $\triangle ABC$ is 42, then the perimeter of $\triangle DEF$ is _____.

26. Quad. $PQRS \sim$ quad $TUVW$. One side of $PQRS$ has length 12. The corresponding side of $TUVW$ has length 15. The perimeter of $TUVW$ is 35 and the perimeter of PQRS is _____.

27. The perimeters of two similar polygons are 20 and 28. One side of the smaller polygon has length 4. The length of the corresponding side of the larger polygon is _____.