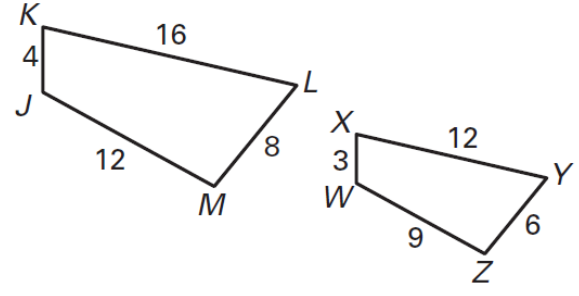Name:_____Period:_____

SM 2

# SM2 Unit 10—Similarity and Proportionality Review

In the diagram to the right, *JKLM ~ WXYZ*.

1. List all pairs of congruent angles.

2. Write the ratios of the corresponding sides in a statement of proportionality.

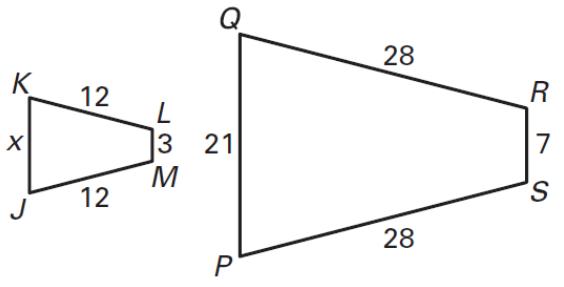3. What is the scale factor of *WXYZ* to *JKLM*?

Use the figure to the right to answer question 4.

4. Determine whether the polygons are similar. (Show your work!) If they are, write a similarity statement and find the scale factor of the larger polygon to the smaller polygon.
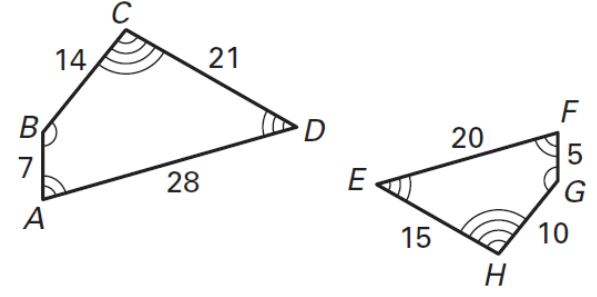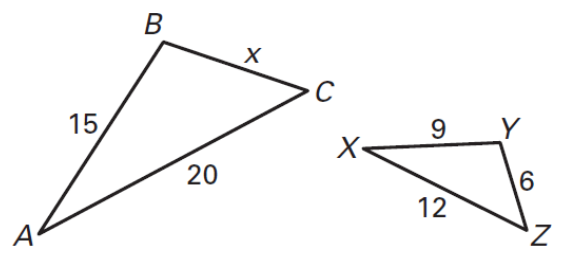
Find the value of *x*.
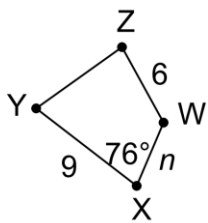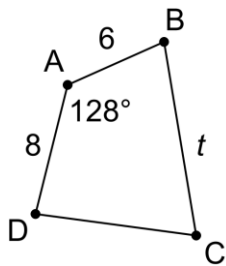
5. *JKLM ~ PQRS*

6. △*ABC ~ △XYZ*

In the figure below, ABCD ~ WXYZ. Answer the following questions.

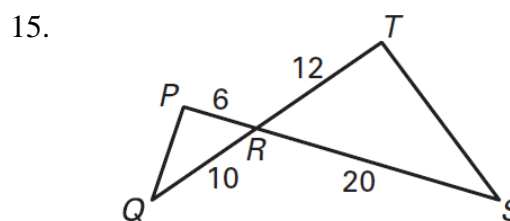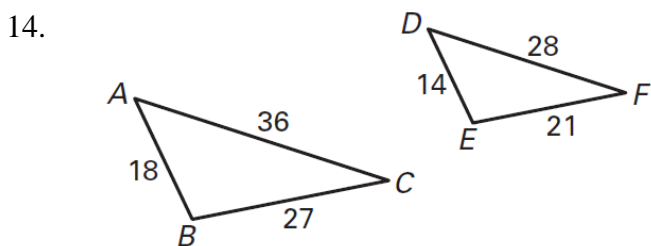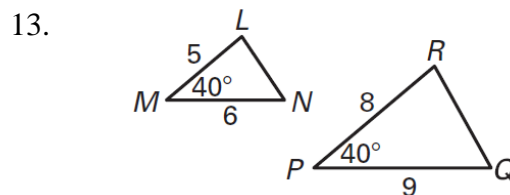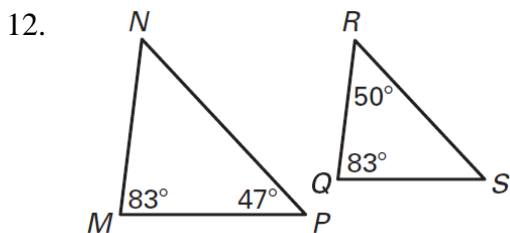7. What is $m\angle B$?   8. What is $m\angle W$?

9. What is the scale factor of ABCD to WXYZ?

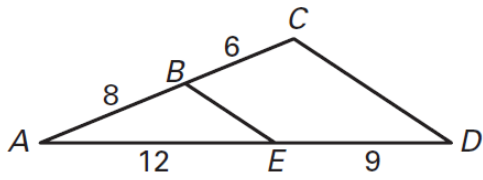10. Find the value of n.   11. Find the value of t.

Determine whether the triangles are similar (Show your work!). If they are similar, write a similarity statement and state which postulate or theorem (AA, SAS, or SSS) justifies your answer.
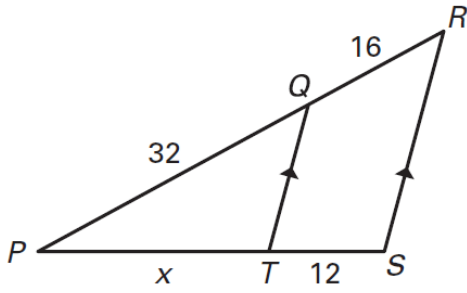
12.

13.

14.

15.

Draw the overlapping triangles separately. Show that they are similar. State which postulate or theorem you would use to prove they are similar (AA, SAS, or SSS). Then write a similarity statement.
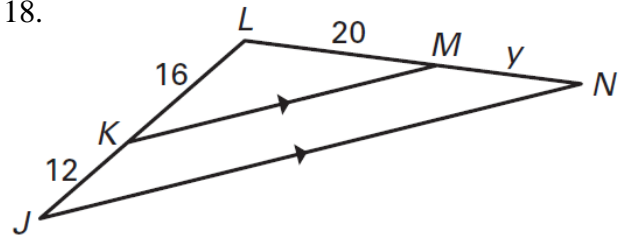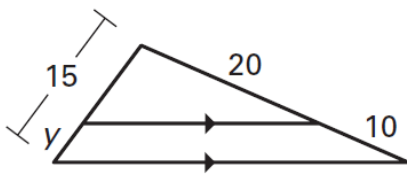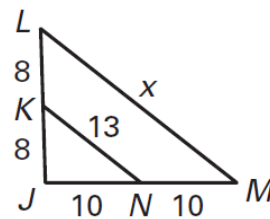
16.

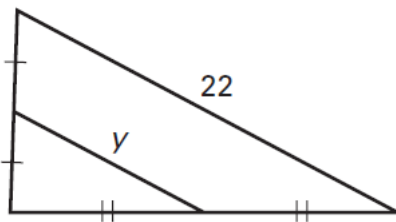**Find the value of the variable.**
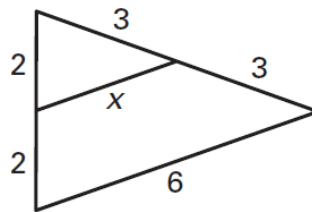
17.
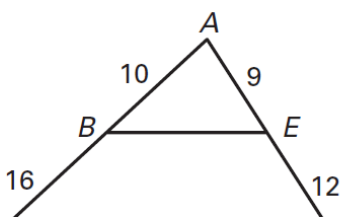

18.

19.

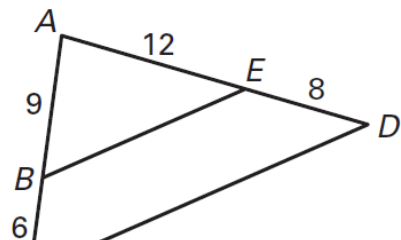

20.

21.

22.

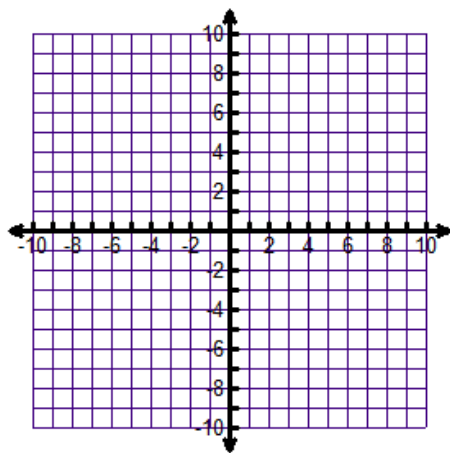**Determine whether $\overline{BE} \parallel \overline{CD}$. Show some work to justify your answer.**
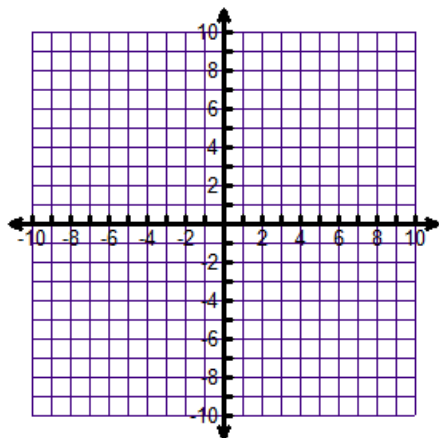
23.

24.

25. Graph and label the parallelogram with vertices A(–4, –2), B(2, 0), C(1, 5) and D(–5, 3), then dilate the parallelogram by a factor of 2 and a center at (0, 0). Label the new vertices A', B', C' and D'. What are the coordinate of the new vertices?

A' (____,____)   B' (____,____)   C' (____, ____)   D' (____, ____)

26. Graph and label the triangle with vertices A(–8, 4), B(–5, 10), and C(–2, –6), then dilate the triangle by a factor of ½ and a center at (0, 0). Label the new vertices A', B' and C'. What are the coordinate of the new vertices?

A' (____,____)   B' (____,____)   C' (____, ____)