Unit 7 Review Name: _____

1. If $\Delta ABC \sim \Delta SPK$, which proportion must be true? **Sketch and label a picture to help you determine the correct answer.**

A. $\frac{AB}{SP} = \frac{BC}{SK}$ **B.** $\frac{AB}{BC} = \frac{PK}{SP}$

C. $\frac{AC}{SK} = \frac{BC}{SK}$ **D.** $\frac{AB}{BC} = \frac{SP}{PK}$

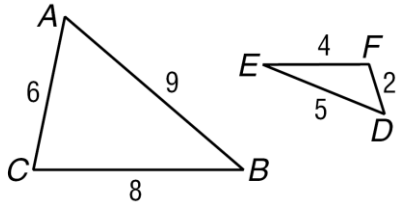
2. The ratio of the measures of the angles of a triangle is 1:3:5. Find the measure of all three angles.

3. A postage stamp 25 millimeters wide and 40 millimeters tall is enlarged to make a poster. The poster is 4 feet wide. Find the height of the poster.

4. A model of a lighthouse has a height of 18 inches and a base with a width of 8 inches. If the width of the base of the actual lighthouse is 20 feet, find the lighthouse's height.

5. The perimeter of a rectangle is 336 inches. The ratio of the length to the width is 9:5. Find the length of the rectangle.

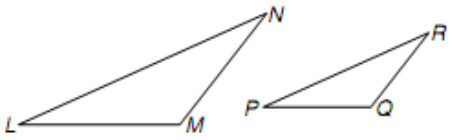
6. Determine whether the following triangles are similar. Justify your answer.



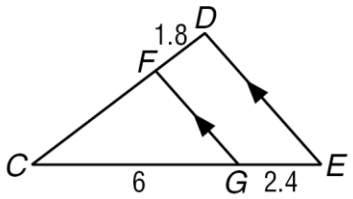
7. In ΔJKL, M is the midpoint of $\overline{JK}$, and P is the midpoint of $\overline{KL}$. If $MP = 34$, find JL.

8. A blueprint for a house states that 2 inches on the blueprint represents 8 feet. If the width of a window is 2.5 inches on the blueprint, what is the actual window's width?

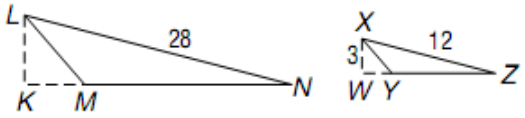
9. $\Delta PQR \sim \Delta LMN$, $LM = 16$, $MN = 14$, $NL = 28$, and $RP = 18$, find the perimeter of ΔPQR.



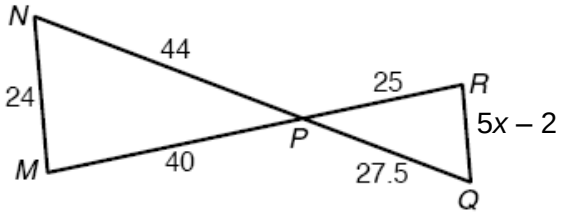
10. Find CD.



11. Suppose $\Delta LMN \sim \Delta XYZ$ with altitudes $\overline{KL}$ and $\overline{WX}$. Find KL.



12. $\Delta MNP \sim \Delta RQP$. Find the value of x.



13. Find the length of $\overline{M'N'}$ under a dilation with a scale factor of 4 if $MN = 5$. Then identify the dilation as an enlargement, a reduction, or a congruence transformation.

$M'N'$ = _____

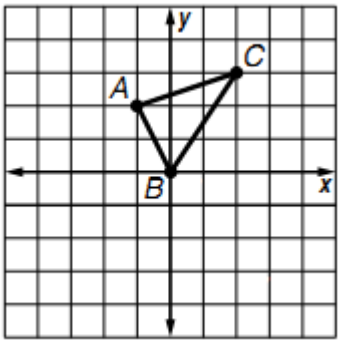
Type of transformation: _____

14. Suppose $AB = 6$ and under a dilation $A'B' = 8$. Find the scale factor. Then identify the dilation as an enlargement, a reduction, or a congruence transformation.

Scale factor = _____

Type of transformation: _____

15. Draw a dilation of $\triangle ABC$ with $r = 1.5$. List the coordinate of the image.

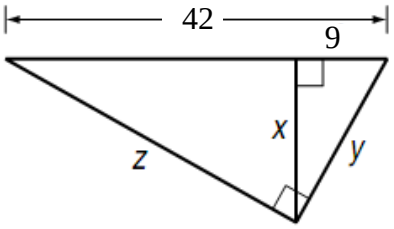


A'(,)

B'(,)

C'(,)

16. Find the values of x, y, and z. Round your answers to 2 decimal places.



17. Draw the image of $ABCD$ under a dilation with center X and a scale factor of 2.5.