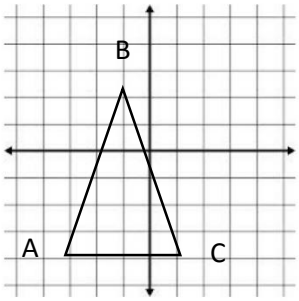
Geometry Semester 1 Exam Review Part 2 **Calculator Allowed**

AMAFS.912.G-CO.2.6

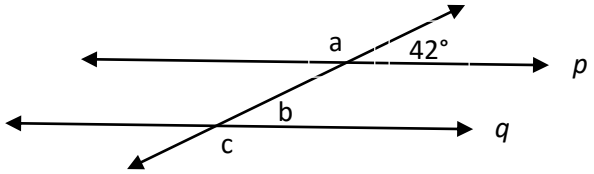
1. Determine the coordinates for the points $A'B'C'$ if the rigid motion transformation of triangle ABC shown below is a reflection across the *x*-axis.



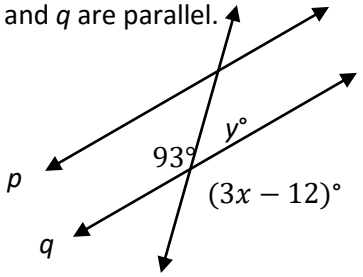
2. Determine which rigid motion transformations result in congruent figures? (Select all that apply.)
   A) Translation B) Rotation C) Dilation D) Reflection

MAFS.912.G-CO.3.9

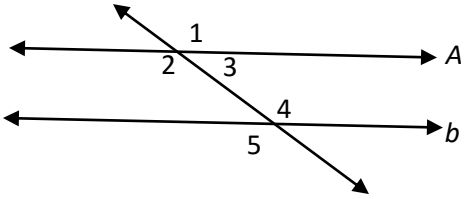
3. Find the measures of angles a, b, and c, if lines *p* and *q* are parallel.



4. Find the values of x and y, if lines *p* and *q* are parallel.

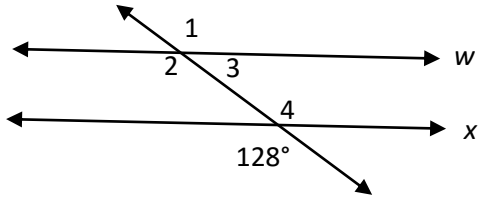


5. Determine whether each statement is true or false based on the diagram below. $a \parallel b$



A. $m\angle 1 = m\angle 4$	B. $m\angle 1 = m\angle 3$
C. $m\angle 2 = m\angle 4$	D. $m\angle 3 = m\angle 4$
E. $m\angle 1 = m\angle 5$	F. $m\angle 4 = m\angle 5$

6. Find the measures of angles 1, 2, 3 and 4, if lines *w* and *x* are parallel.



MAFS.912.G-GPE.2.5

7. Match the pairs of equations with the descriptions.

A. $8x + 4y = -8 \; and \; y = -2x + 6$
B. $y = \frac{3}{4}x - 1 \; and \; y = -\frac{4}{3}x + 3$
C. $5x + 5y = 0 \; and \; -5x - 3y = 1$

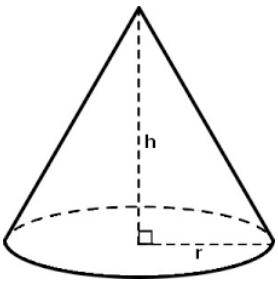
X. The lines are neither parallel nor perpendicular.
Y. The lines are parallel.
Z. The lines are perpendicular.

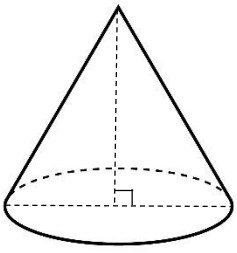
8. Given the following points, describe the relationship between lines $\overline{AB}$ and $\overline{CD}$.
   $A\,(-4\;\;7), B(2,1), C(-2,2) and\; D\;(1,5)$
9. Describe the relationship between these two lines: $y = 3 \; and \; y = -4$.
10. Describe the relationship between these two lines: $y = 2x + 4 \; and \; y = -\frac{1}{2}x - 3$.
11. Describe the relationship between these two lines: $x = 5 \; and \; y = -2$.
12. Find the equation of the line in Slope-Intercept Form that passes through $(-2, 6)$ and is parallel to $y = 3x - 1$.
13. Find the equation of the line in Slope-Intercept Form that passes through (0, 2) and is perpendicular to $y = \frac{1}{2}x + 1$

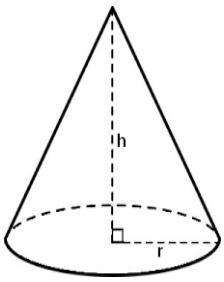
MAFS.912.G-GMD.1.3

14. Find the volume of each cone shown, and round to the nearest tenth, if necessary. (This is NOT multiple choice!)

A. $h = 5.6\,cm \;\; r = 3.9\,cm$ B. $h = 16\,ft \;\; d = 18\,ft$ C. $h = 5\frac{1}{2}\,in \;\; r = 2\frac{1}{4}\,in$



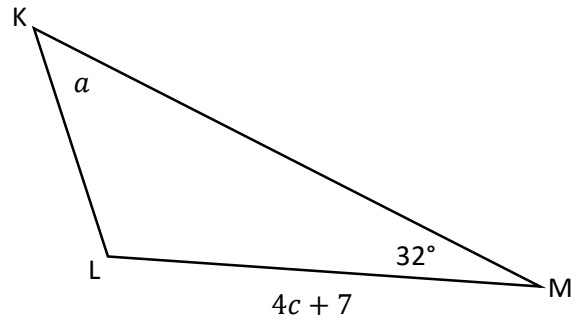


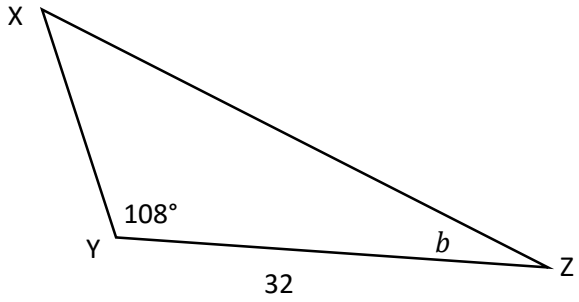


15. Find the volume of a sphere with a diameter of 33 inches, and round to the nearest tenth, if necessary.
16. Find the volume of a sphere with a radius of 6.4 cm, and round to the nearest tenth, if necessary.
17. A building in the shape of a square pyramid is being built in Las Vegas. The height of the building will be 309 feet, and a side of the base will measure 250 feet. The scale model that is displayed at a convention is one fiftieth the size of the actual building. What is the volume of the scale model, rounded to the nearest tenth?

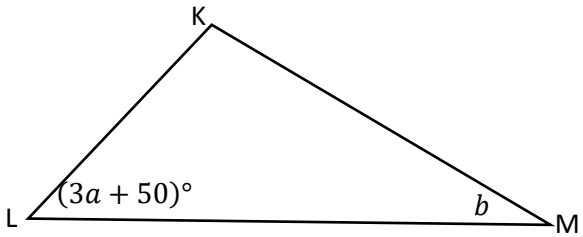
MAFS.912.G-SRT.2.4 and MAFS.912.G-SRT.2.5

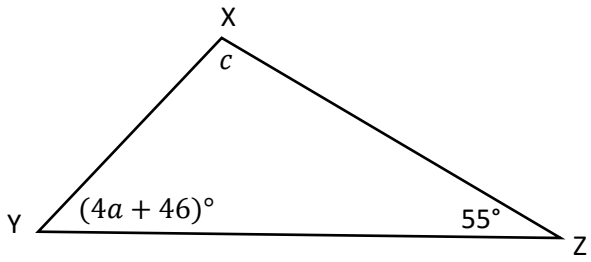
18. Find the value of $a, b \text{ and } c$ when $\Delta KLM \cong \Delta XYZ$.



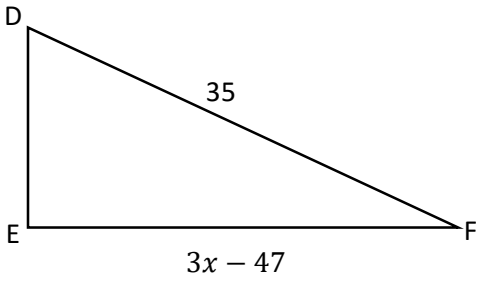


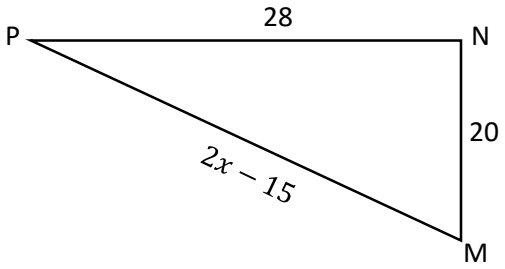
19. Find the value of $a, b \text{ and } c$ when $\Delta KLM \cong \Delta XYZ$.





20. Find x and the perimeter of ΔDEF if $\Delta DEF \cong \Delta MNP$.





21. For ΔRAM and ΔBOX, $\angle A \cong \angle O$ and $\overline{AR} \cong \overline{OB}$. What other congruence statement is necessary to prove the two triangles congruent?