

Name _____

Summer Recommendation Review

Check off ALL that apply in each row:

	Natural #	Whole #	Integer	Rational #	Irrational #	Real #
-9						
$\frac{3}{5}$						
8						
-0.373737...						
π						
0						
$\sqrt{18}$						
$\sqrt{.36}$						

Name the property being illustrated. Write out the entire word.

$(-4 + 4) - 9 = 0 - 9$ _____

$-2(6 + 5) = -12 - 10$ _____

$.68 \times 1 = .68$ _____

$ab + c = ba + c$ _____

Simplify by combining like terms.

$-3(7p - 9) - (5p + 4)$

$6x^2 - 8x + 11x - 3 + -9x^2 + 3$

$\frac{n}{2} + \frac{n^2}{3} - \frac{n}{5} - \frac{n^2}{4}$

Find the additive and multiplicative inverses of -1.75 (no decimals in fractions):

Evaluate each expression for the given values of the variables. $m = -6, x = -4, y = -8$

$-m(2m + m^2) - 5m$

$x^2 - 5y + 9x$

$\frac{4(3x - 1) - 5(3 - x)}{x + 7}$

$-|-3m - x + 4y|$

Solve each equation or inequality. Show all work. Circle final answer. Graph all inequalities. Check!

$$19x + 15 = -5x - 57$$

$$4m - 18 - 9m = -2(3m + 9) - m$$

$$\frac{x}{3} - \frac{x}{4} + \frac{x}{6} = 20$$

$$10 - 3(4n - 5) = 2(9 - 6n)$$

Solve for **b**.

$$4S = \frac{a + c}{3b}$$

Solve for **x**.

$$mx + n = px + r$$

$$-2|2n - 9| + 8 = -12$$

$$|2y + 5| = 3y$$

$$\frac{-2(x-7)}{5} \geq 4$$

$$-9(4-x) + 8 < 9x$$

$$3x + 4 \geq 1 \text{ and } -2x + 7 \geq 5$$

$$-3x > 12 \text{ or } 3x \geq 12$$

$$|2x + 7| \leq 13$$

$$-4|x - 6| < 12$$

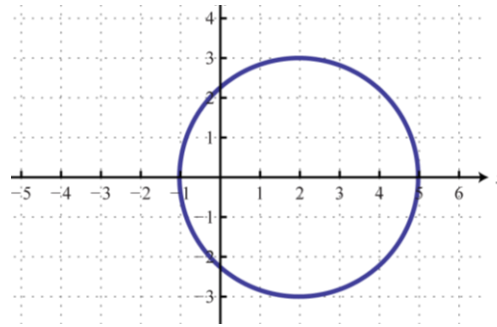
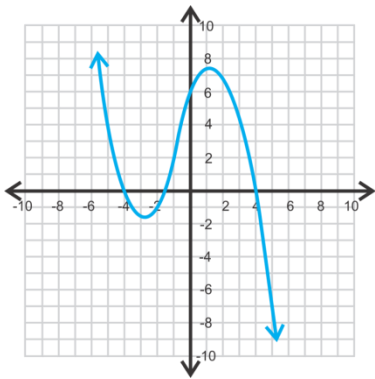
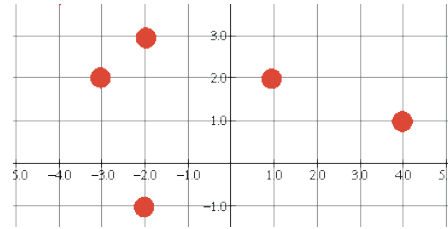
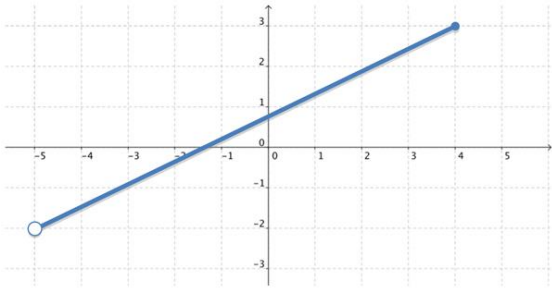
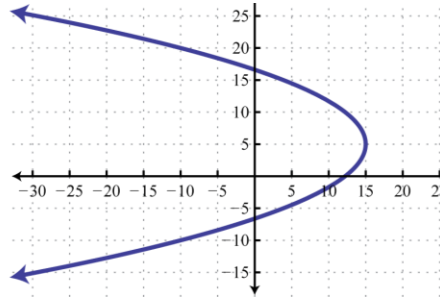
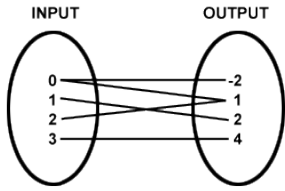
For each word problem, define your variables, write an equation or inequality, and solve. Show all work and circle final answer.

The measures of an angle and its supplement are in the ratio 4:11. Find the 2 angles.

The sum of 4 consecutive odd integers is 240. Find the 4 integers.

7 less than 3 times a number is greater than the quotient of 6 times a number and 9.

State the domain and range of each relation and determine whether or not each is a function. If it is a function, determine if it is a "one to one" function.



Use the given functions to find each value: $f(x) = x^2 - 8$, $g(x) = 5 - 2x$

$$f(-3) =$$

$$2g(3) + 4f(1) =$$

$$\frac{g(-4)}{f(-5)} =$$

Is each equation a linear function, yes or no?

$$y = 6 - 2x$$

$$y = 2x^3$$

$$x = 4y + 5$$

$$y = \frac{3}{x}$$

$$5x - 4y = 10$$

Write each in standard form and slope-intercept form. Find the x and y intercepts. Find the slope. Graph.

$$\frac{3}{8}x - \frac{y}{4} = 6$$

$$\frac{4x}{6} + 10 = 2y$$

Standard: _____

Standard: _____

Slope-Intercept: _____

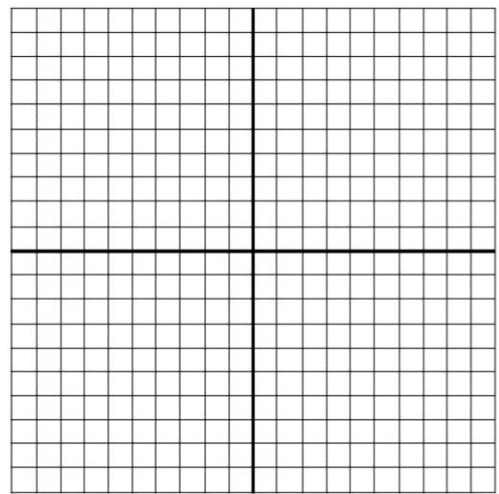
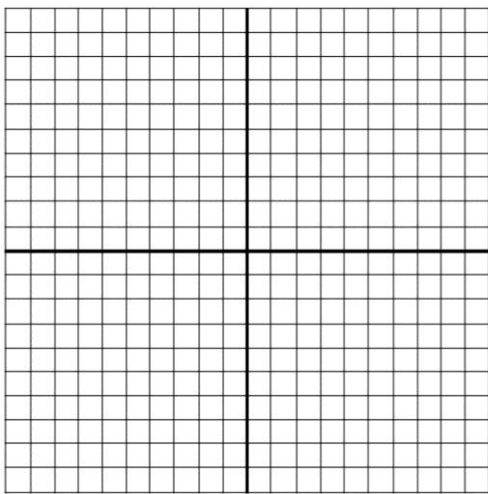
Slope-Intercept: _____

x-intercept: _____ y-intercept: _____

x-intercept: _____ y-intercept: _____

slope: _____

slope: _____



Find the slope of the line that passes through the two given points. Is the line diagonal, vertical, or horizontal?

$(-3, 5) (-8, -2)$

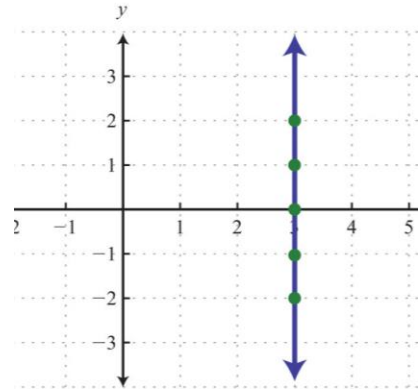
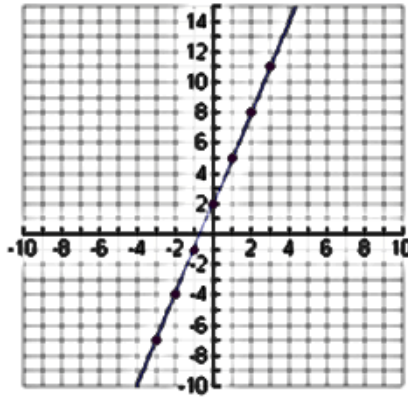
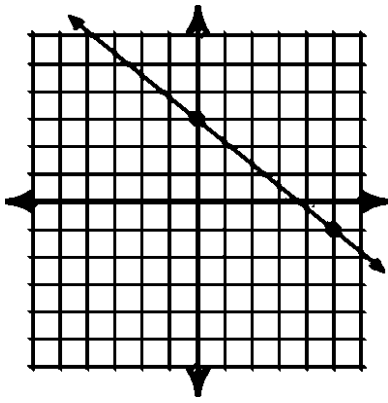
$(2, -4) (-6, -4)$

$(9, -1) (9, 7)$

Write an equation in slope-intercept form of a line that has the given characteristics.

slope: -2, passes through point (-5, 8)	passes through (3, -6) and (9, 3)
passes through (4, -6) and is parallel to $2x + 4y = 12$	passes through (-8, -4) and is perpendicular to $y = 2x + 9$
passes through (8, 7) and is vertical	passes through (-2, -5) and is horizontal

Write an equation in slope-intercept form for each



Describe each system as Independent, Dependent, or Inconsistent.

$$\begin{cases} y = 2x - 5 \\ 2x + y = 8 \end{cases}$$

$$\begin{cases} y = 2x - 5 \\ 8x - 4y = 8 \end{cases}$$

$$\begin{cases} y = 2x - 5 \\ -6x + 3y = -15 \end{cases}$$

Solve each system by substitution.

$$\begin{cases} x = 2y - 8 \\ 6y - 3x = 24 \end{cases}$$

$$\begin{cases} 4a - b = 6 \\ 2a + 5b = -8 \end{cases}$$

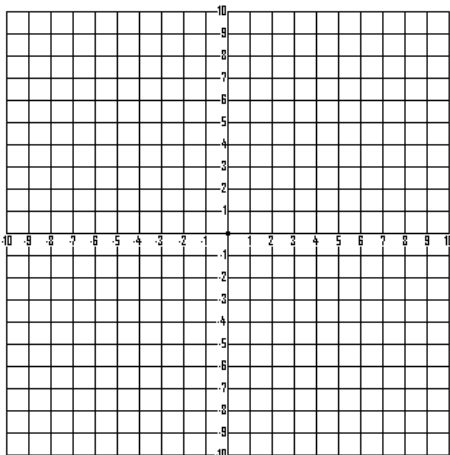
Solve each system by elimination.

$$\begin{cases} 7x + 9y = 20 \\ 6x - 3y = 10 \end{cases}$$

$$\begin{cases} 10m - 8n = -14 \\ 4m - 6n = 0 \end{cases}$$

Solve each system by graphing.

$$\begin{cases} y = -3x \\ 4x - 2y = 20 \end{cases}$$



$$\begin{cases} x = -2 \\ -6x + 3y = -12 \end{cases}$$

