

Name: _____

Date: _____ Period: _____

Unit 4/5 Practice

Objective 1: Solving Systems of Equations with two variables.

1. $6x - 5y = 3$
 $2x - 18y = 50$

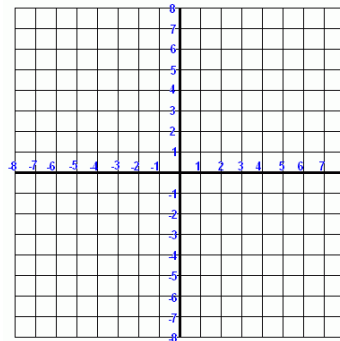
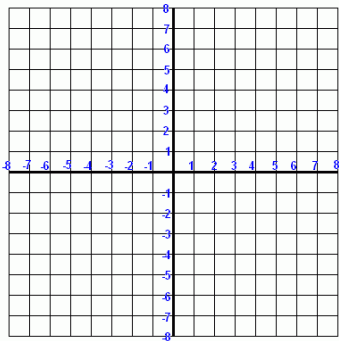
2. $3x - 4y = 8$
 $6x + 3y = 27$

3. $-2x + y = 8$
 $x + \frac{1}{3}y = \frac{-2}{3}$

Objective 2: Solving Systems of Inequalities with two variables.

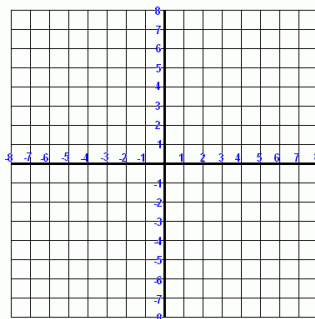
1. $y \geq -x + 5$
 $-y \leq -x - 3$

2. $x - 2y < 3$
 $y > 3x + 6$



Objective 3: Stretch and Compression

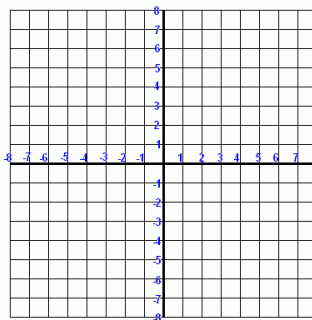
1. Graph $y = \frac{2}{5}|x - 1|$



Name: _____

Date: _____ Period: _____

2. Graph the equation $y = 3|x|$. Then describe the transformation from the parent function $f(x) = |x|$.



3. Describe how is $y = -2(x - 1)^2$ related to the the parent function, $y = x^2$?

Objective 4 – Solving Systems of Equations in Three Variables

Solve the following systems using any method. Show work on a separate piece of paper.

1.
$$\begin{cases} 3x - 4y + 3z = -3 \\ -4x - 2y + 3z = -2 \\ -5x + 2y + 4z = -17 \end{cases}$$

Solution: _____

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

Solution: _____

Objective 5 – Solving Quadratics by Square-Rooting

Solve for the given variable

1. $20 = x^2 - 5$

x = _____

2. $0 = x^2 - 144$

x = _____

3. $36 = \frac{1}{4}(x+1)^2$

x = _____

4. $196 = (x - 3)^2$

x = _____

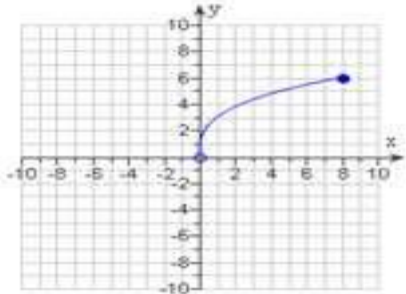
Name: _____

Date: _____ Period: _____

Distributive Practice

1. If y varies directly with x and $y = 36$ when $x = 2$, what is the constant of variation?
Find the value of y when $x = 14$.

2. Identify the Domain and Range



3. Solve and check for extraneous solutions: $4|x + 7| = 2x + 3$
4. Write the equation of a line that is perpendicular to $y = 4x - 3$ and runs through point $(14, -6)$ in STANDARD form.
5. A shopper's discount club charges a monthly fee of \$15 and sells gasoline for \$2.05 per gallon. The gas station across the street sells gasoline for \$2.35 per gallon and charges no fee. How many gallons of gasoline would you have to buy in one month to spend the same amount at either store?
6. Write the equation of a line in standard form through the points $(4, -2)$ and $(1, 5)$
7. Solve: $\frac{1}{2}(x + 1) + x = \frac{2}{3}(x + 2)$
8. Evaluate: $f(x) = \frac{1}{3}x^2 + 4x - 2$ for $f(3)$
9. Solve: $3|x - 4| + 1 \geq 22$
10. Write an equation of the function.

