

Cumulative Review Chapters 1-3

Name _____

Ch 1 – Intro:

1. Simplify: $3(x + 2) - 4(x - 9)$

2. Evaluate $3x^2 + 2(x + 5) - |3x|$ when $x = -2$

Ch 1 – Solve Equations and Inequalities

Solve and graph the solution on a number line:

1. $-2 \leq -3x + 5 < 14$

2. $3(x + 7) + 12 = -15 + x$

3. $4|x - 9| + 2 > 18$

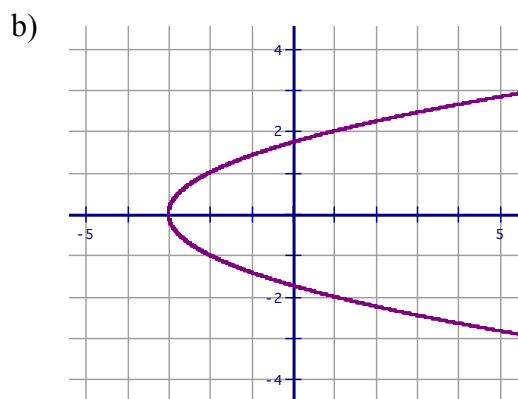
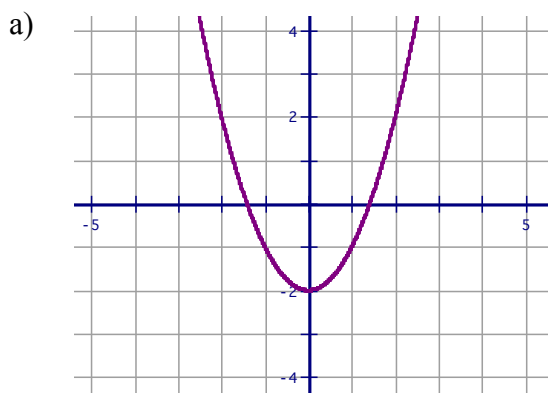
Ch 1: Applications of Expressions, Equations, and Inequalities

1. To rent a car it costs \$19.95 per day plus \$.20 per mile. How many miles did you drive if the total cost for renting the car for one day is \$56.25?

2. The length of a rectangular yard is 50 feet and its perimeter is less than 170 feet. Describe the width of the yard.

Ch 2: Functions

1. Is it a function? Explain.



c)

x	y
2	5
3	6
4	6

d)

x	y
7	4
7	2
9	-3

2. If $f(x) = 2x - 5$ and $g(x) = -3x + 4$, find the following:

a) $f(3)$

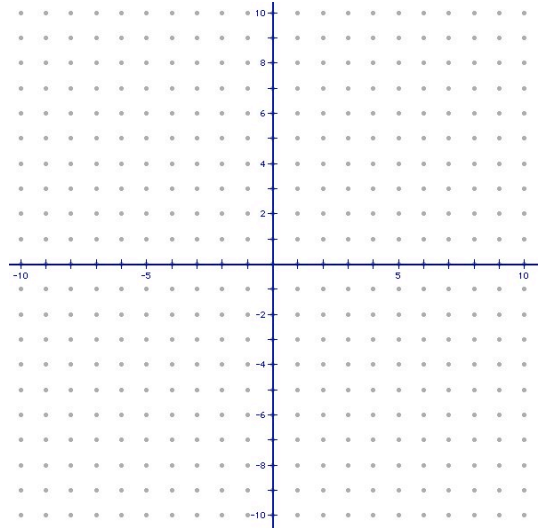
b) $g(-2)$

c) $f(-1) + g(3)$

Ch 2: Linear Functions, Graphs, and their Applications

1. Explain how to determine if 2 lines are parallel or perpendicular by looking only at the equations.

2. Graph $3x - 4y = -12$. Find the slope, x-intercept, and y-intercept.



3. There were 174 words typed in 3 minutes. There were 348 words typed in 6 minutes.

a) Write the equation of the line (in all three forms) to represent the words typed in x minutes.

Point-Slope Form _____

Slope-Intercept Form _____

Standard Form _____

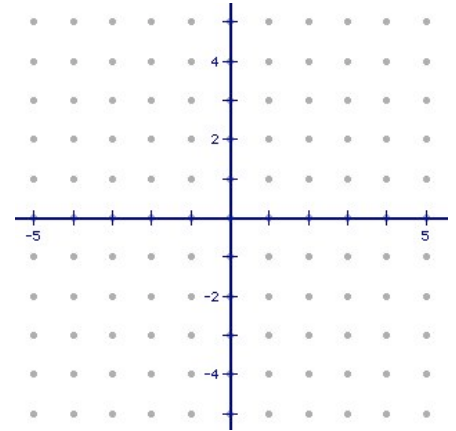
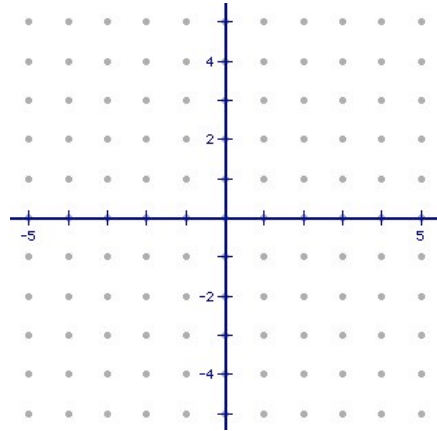
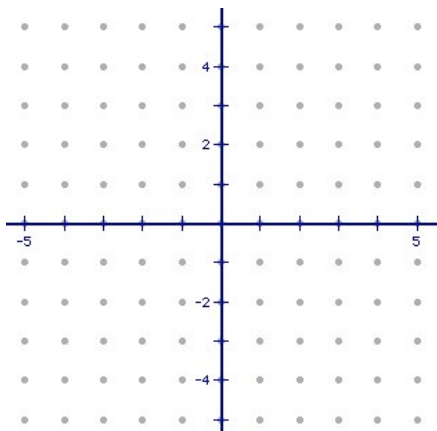
b) How many words will be typed in 15 minutes?

Ch 2 : Graph Absolute Value Equations and Inequalities.

1. $y = -3|x + 2| + 1$

2. $y > -2$

3. $y < -|x - 1| + 2$

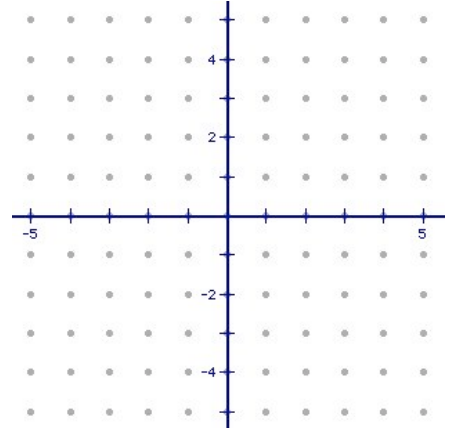


Ch 3: Solve systems of equations and inequalities

1.
$$\begin{cases} x + 2y = 10 \\ 3x - y = 9 \end{cases}$$

2.
$$\begin{cases} y = 3x - 4 \\ 2y - 6x = -8 \end{cases}$$

3.
$$\begin{cases} y < x - 3 \\ y \geq |x - 3| \end{cases}$$



Ch 3: Applications of systems of Equations and Inequalities

1. Suppose you bought eight oranges and one grapefruit for a total of \$4.60. Later that day, you bought six oranges and three grapefruits for a total of \$4.80. Now you want to find the price of each orange and of each grapefruit. Write an equation for each purchase. Solve the system of equations.

2. Melissa babysits a maximum of 10 hours per week for her neighbor and her brother. She spends at least 3 hours babysitting for her neighbor and at most 5 hours babysitting for her brother.

a) Write a system of inequalities to model the situation.

b) Graph and solve the system.

