

Warm up
Semester Review #1

1. Solve the equation. Justify your steps

$$\frac{3}{5}(x - 5) = 18$$

Justify

2. You have been saving for 3 months for a pair of Beats® Headphones and you think that you finally have enough! You have saved a total of \$215.00. The sales tax is 7%. Do you have enough money?



3. If $-5x = 2x + 42$, then what is $2x + 18$?

4. Translate the verbal model then solve the equation.

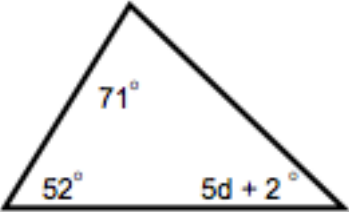
The difference of 24 and eight times a number is 4 times the same number.

5. Solve the literal equation for y.

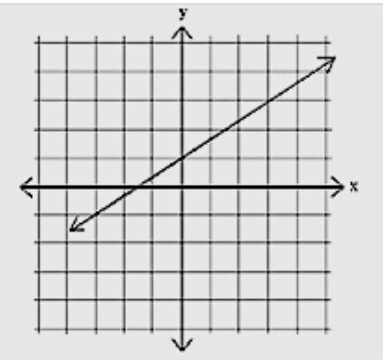
$$4x - 2y = 10$$

6. Solve the equation. $5(x + 2) - 5x = 12$

Warm up
Semester Review #2

<p>1. Solve the equation: $2(3x + 1) = 3(x + 6) - x$</p>	<p>2. At a restaurant, you and four friends divide the bill evenly. Each person pays \$7.35. How much is the total bill?</p>
<p>3. Determine if the relation is a function. $\{(2, 5), (1, 8), (0, 11), (-1, 14), (-2, 17)\}$</p>	<p>4. Which of the equations are equivalent? a. $6x + 6 = -14$ b. $8x + 6 = -2x - 14$ c. $5x + 3 = -7$ d. $7x + 3 = 2x - 13$</p>
<p>5. Find the value of d given the triangle below. Remember that the sum of the angles of a triangle is 180°</p>  <p>The diagram shows a triangle with three interior angles. The top angle is labeled 71°. The bottom-left angle is labeled 52°. The bottom-right angle is labeled $5d + 2^\circ$.</p>	<p>6. Solve and graph the inequality. $-5h + 6h \geq 8 - 1$</p>

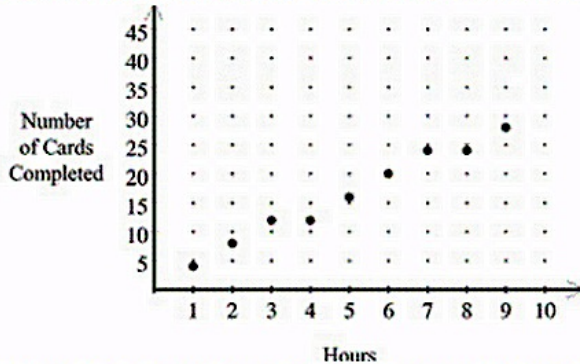
Warm up
Semester Review #4

<p>1. Circle the step in which the error was made. Then correct the error.</p> <p style="margin-left: 40px;">Step 1: $4(x+2) - 3x = 15$</p> <p style="margin-left: 40px;">Step 2: $4x+8-3x = 15$</p> <p style="margin-left: 40px;">Step 3: $7x+8 = 15$</p> <p style="margin-left: 40px;">Step 4: $7x = 7$</p> <p style="margin-left: 40px;">Step 5: $x = 1$</p>	<p>2. Find all the linear function(s). (There may be more than one)</p> <p style="margin-left: 40px;">a. $-3x + 5 = 2x$ b. $\frac{7}{x} + 8 = 11$</p> <p style="margin-left: 40px;">c. $\sqrt{x} - 4 = 16$ d. $5 + \frac{x}{3} = 6$</p> <p style="margin-left: 40px;">e. $\frac{2}{3}x = 5(x - 1)$ f. $x^2 - 9 = 0$</p> <p>Answer: _____</p>										
<p>3. $f(x) = -\frac{1}{2}(x + 4)$</p> <p>Find $f(-2)$</p> <p>Find x if $f(x) = -5$</p>	<p>4. Which equation represents the graph illustrated below?</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>a. $y = \frac{3}{2}x + 1$</p> <p>b. $y = \frac{2}{3}x + 2$</p> <p>c. $y = -\frac{2}{3}x + 1$</p> <p>d. $y = \frac{2}{3}x + 1$</p> </div>  </div>										
<p>5. Write an equation in slope-intercept form that contains the point (1, 5) and has the same slope as $2x + y = 9$.</p>	<p>6. Write a linear function represented by the table below.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <tbody> <tr> <td style="padding: 5px;">x</td> <td style="padding: 5px;">1</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">3</td> <td style="padding: 5px;">4</td> </tr> <tr> <td style="padding: 5px;">y</td> <td style="padding: 5px;">8</td> <td style="padding: 5px;">6</td> <td style="padding: 5px;">4</td> <td style="padding: 5px;">2</td> </tr> </tbody> </table>	x	1	2	3	4	y	8	6	4	2
x	1	2	3	4							
y	8	6	4	2							

Warmup Semester Review #5

1.

Joshua is making home-made cards to send to friends and family and to sell at the local craft fair. This scatter plot shows the total number of cards he had made after each hour he worked on the task.



Using this information, what is the best prediction of the number of cards Joshua can make in 12 hours?

- a. 51 b. 36 c. 16 d. 26

2. Determine which lines are parallel and which lines are perpendicular. (Some choices may be used more than once)

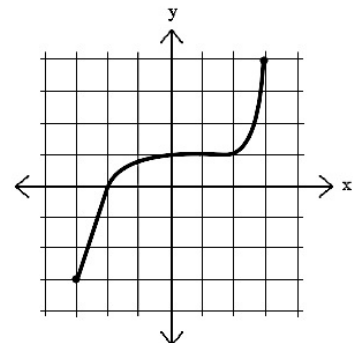
a. $y = 5x + 2$	b. $x = -3$
c. $5 + 5y = -x$	d. $x = 7$
e. $y - 3 = 5(x - 1)$	f. $y = 0$

Parallel Perpendicular

3. Your friend tells you that the formula for the n^{th} term of the arithmetic sequence 15, 12, 9, 6, ... is $a_n = -2 + 17n$. Is your friend correct? Explain your reasoning?

4. Solve and graph the linear inequality.
 $-6m < 42$

5. For what value of x does $f(x) = 4$



**Warmup
Semester Review #6**

1. The table shows the rate of fixing your car at an auto mechanic shop.

Number of hours, h	Total cost c(h)
1	\$125
2	\$170
3	\$215
4	\$260

Write a function represents the situation?

2. Which of the equations below are perpendicular to $y = 2x - 8$

I. $-2x + y = 4$

II. $x - 2y = 6$

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

IV. $y = -2x - 8$

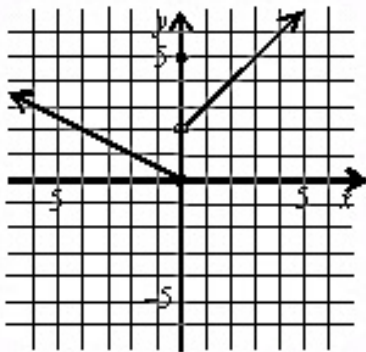
V. $y - 4 = \frac{1}{2}(x + 2)$

VI. $y - 3 = -\frac{1}{2}(x + 6)$

3. Write a formula for the nth term of the arithmetic sequence: $-3, 0, 3, 6, \dots$

4. Use the formula $a_n = -4n + 2$ to find a_6 .

5. Which piecewise function has the following graph?



a. $f(x) = \begin{cases} -\frac{1}{2}x, & x < 0 \\ x + 2, & x > 0 \end{cases}$

b. $f(x) = \begin{cases} -\frac{1}{2}x, & x \leq 0 \\ x + 2, & x > 0 \end{cases}$

c. $f(x) = \begin{cases} \frac{1}{2}x, & x > 0 \\ x + 2, & x < 0 \end{cases}$

d. $f(x) = \begin{cases} 2x, & x \leq 0 \\ x + 2, & x > 0 \end{cases}$

6. Evaluate $f(-9)$ for $f(x) = \begin{cases} x + 3, & x \geq 0 \\ -x - 1, & x < 0 \end{cases}$


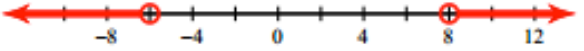
a. 8

b. -10

c. -6

d. 3

Warmup
Semester Review #7

<p>1. Is $(5, -3)$ a solution of the following system of inequalities?</p> $4x + 3y > 2$ $x - 2y < -6$	<p>2. Write a compound inequality that represents the following graphs:</p> <p>a.</p>  <p>b.</p> 
<p>3. Write an equation for the nth term of the arithmetic sequence: 90, 110, 130, 150, Then find a_{25}.</p>	<p>4. Find the slope of the line that passes through $(5, -8)$ and $(11, -10)$.</p>
<p>5. Solve for x: $6x + 2(3x - 5) > 15x + 2$</p>	<p>6. Computer A costs \$1200 and has a \$150 mail-in rebate. Computer B costs \$1200 and is on sale for 15% off. Which computer is cheaper?</p>

**Warmup
Semester Review #8**

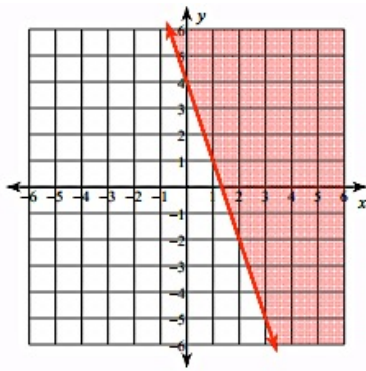
1. What is the x-coordinate of the solution to the system of equations?

$$4x + 8y = 20$$

$$-4x + 2y = -30$$

2. Write the equation in point-slope form that is parallel to $y = -2x + 5$ and passes through $(-3, 4)$.

3. Write an inequality that represents the following graph:



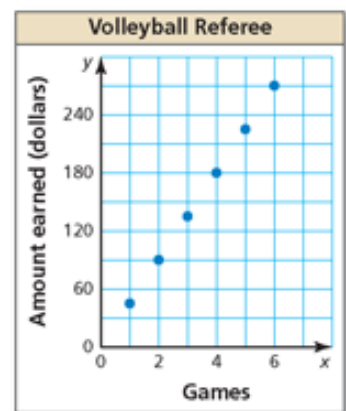
4. If $f(x) = 4x - 7$, find $f(11) + f(2)$.

5. The graph shows the amounts y (in dollars) that a referee earns for refereeing x high school volleyball games.

a. Does the graph represent a linear or nonlinear function?

b. Is the domain of the function discrete or continuous?

c. How much money can a referee earn if he/she referees eight games?



6. Rewrite the equation, $2x - 4y = 20$, in slope-intercept form. Then state its slope and its y-intercept.