

Algebra 2
2-4 Worksheet

Name: _____
Date: _____ Period: _____

Write an equation for each line.

1. y-intercept of -2, x-intercept of 3.5
2. through (1.2, 5), x-intercept of 3.7

For each situation, find a linear model and use it to make a prediction.

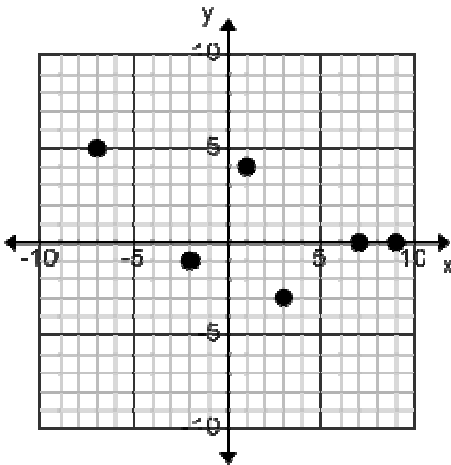
3. The cost of producing 4 units is \$204.80. The cost of producing 8 units is \$209.60. How much does it cost to produce 12 units?
4. There were 174 words typed in 3 minutes. There were 348 words typed in 6 minutes. How many words will be typed in 8 minutes?
5. After 5 months the number of subscribers to a newspaper was 5730. After 7 months the number of subscribers was 6022. How many subscribers to the newspaper will there be after 10 months?

Write each equation in standard form.

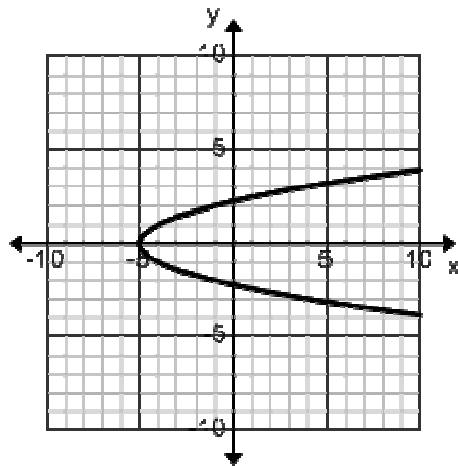
6. $y = \frac{3}{2}x - 4$
7. $y + 1 = -\frac{2}{5}(x - 10)$

Determine if each graph is a function. State the domain and range.

8.



9.



10. If $f(x) = 2|x - 4|$ and $g(x) = -x^2$, find:

- a) $f(-5) + g(3)$
b) $\frac{f(-8)}{g(6)}$

Answers

1. $y = \frac{4}{7}x - 2$

2. $y = -2(x - 3.7) = -2x + 7.4$

3. $y - 204.8 = \frac{6}{5}(x - 4)$; \$214.40

4. $y - 174 = 58(x - 3)$; 464 words

5. $y - 5730 = 146(x - 5)$; 6460 subscribers

6. $3x - 2y = 8$

7. $2x + 5y = 15$

8. Yes. D: $\{-7, -2, 1, 3, 7, 9\}$ R: $\{-3, -1, 0, 4, 5\}$

9. No. D: $x \geq -5$ (or $[-5, \infty)$) R: all real numbers $(-\infty, \infty)$

10. a) 9 b) $-\frac{2}{3}$