Chapter 4 Quiz 2 Review

Write the formula for each equation.

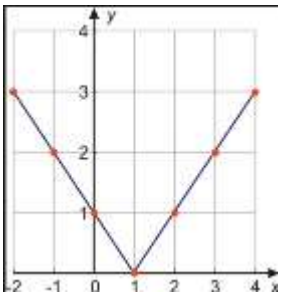
1. Slope-Intercept Form
2. Point-Slope
3. Standard Form
4. Linear Parent Function
5. Absolute Value Parent Function
6. Slope Formula

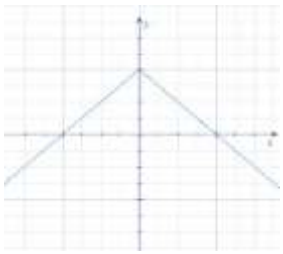
Compare each graph to the parent function.

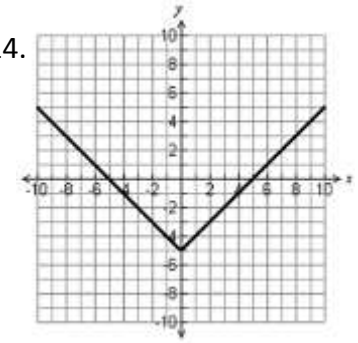
7. $f(x) = -x + 7$
8. $f(x) = 3|x| + 2$
9. $f(x) = -\frac{1}{2}|x - 5| - 1$

10. Given, $f(x) = -\frac{3}{5}|x - 7|$
    a. What is the vertex of the graph?
    b. Does the graph open up or down?
    c. Does the graph have a minimum or a maximum value?
    d. What is the minimum or maximum value?
    e. What is the axis of symmetry?
    f. What is the domain of the function?
    g. What is the range of the function?
11. Graph the function $y - 2 = 3(x + 7)$

Write the absolute value equation of the function represented by the graph.

12. 

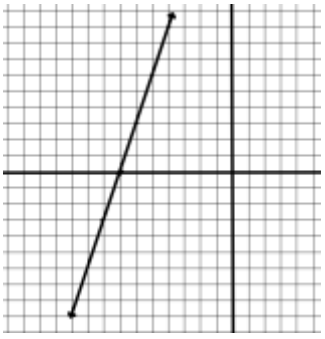
13. 

14. 

15. Given a line that passes through the point (-2,7) and has a slope of ½,
    a. Write the equation in Point-Slope Form
    b. Write the equation in Slope-Intercept Form
    c. Write the equation in Standard form with integer values and a positive leading coefficient.

16. Given a line that passes through the points (4,-2) and (0,8),
    a. Write the equation in Point-Slope Form
    b. Write the equation in Slope-Intercept Form
    c. Write the equation in Standard form with integer values and a positive leading coefficient.

Answers:

1. $y = mx + b$
2. $y - y_1 = m(x - x_2)$
3. $Ax + By = C$
4. $f(x) = x$
5. $f(x) = |x|$
6. $\frac{y_2 - y_1}{x_2 - x_1} = m$
7. Vertical translation up 7 units with reflection
8. Vertical stretch by a factor of 3, vertical translation up 2 units
9. Vertical shrink with reflection by a factor of –1/2, horizontal translation 5 units right and a vertical translation down 1 unit
10.
    a. (7,0)
    b. Down
    c. Maximum
    d. 0
    e. $x = 7$
    f. {all real numbers}
    g. {y|y≤0}
11. 
12. $f(x) = |x - 1|$
13. $f(x) = -|x| + 4$
14. $f(x) = |x| - 5$
15. Point-slope: $y - 7 = \frac{1}{2}(x + 2)$
    Slope-Intercept: $y = \frac{1}{2}x + 8$
    Standard Form: $x - 2y = -16$
16. Point-Slope: $y + 2 = -\frac{5}{2}(x - 4)$
    Slope-Intercept: $y = -\frac{5}{2}x + 8$
    Standard Form: $5x + 2y = 16$