Algebra 2
Review for Ch.2 test (Tues.)

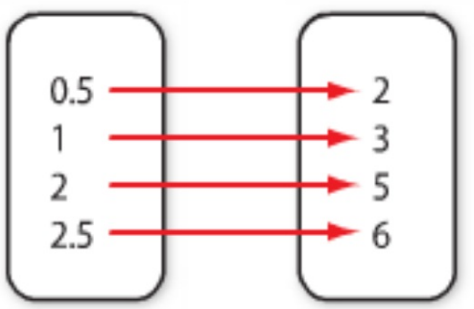
Quiz 2.7-2.8

State the domain and range of each relation. Then determine whether each relation is a *function*. If it is a function, determine if it is *one-to-one*, (Lesson 2-1)

1.

x	*y*
−2	4
−1	1
2	4
2	6

2.



Find the x-intercept and y-intercept of the graph of each equation. Then graph the equation using the intercepts. (Lesson 2-2)

3. $y = 3x - 9$

4. $2y - 5x = 10$

7. **REPAIR** An auto mechanic charges an initial fee of $25 plus an hourly fee of $35. (Lesson 2-2)

   a. Write an equation to represent the situation.

   b. How much did it cost Stacy if the mechanic fixed her car in 3.5 hours?

(Does she have to pay for the entire hour?)

Find the slope of the line that passes through each pair of points. (Lesson 2-3)

8. $(1, -7), (-3, 5)$

Write an equation of the line passing through each pair of points. (Lesson 2-4)

12. $(-3, -14), (1, -2)$

Write the equation of a line parallel to $y = 2x + 3$ passing through $(1,7)$.

Write the equation of a line perpendicular to
$y = -3x + 2$ passing through $(-6, 8)$

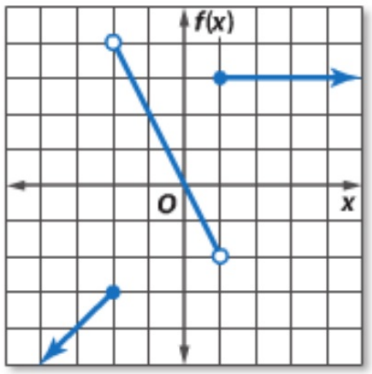
2-5 Scatter Plots and Lines of Regression

Make a scatter plot and a line of fit and describe the correlation for each set of data. Then, use two ordered pairs to write a prediction equation.

42. **HEATING** The table shows the monthly heating cost for a large home.

Month	Sep	Oct	Nov	Dec	Jan	Feb
Bill ($)	72	114	164	198	224	185

46. Write the piecewise-defined function shown in the graph.

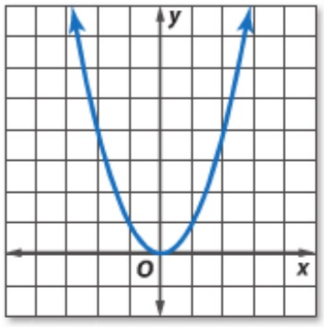


$$f(x) = \begin{cases} x - 1 & \text{if } x \le -2 \\ -2x & \text{if } -2 < x < 1 \\ 3 & \text{if } x \ge 1 \end{cases}$$

2-7 Parent Functions and Transformations

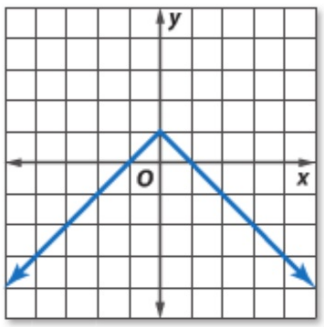
Identify the type of function represented by each graph.

49.



quadratic
$y = x^2$

50.



abs val
$y = |x|$

51. Describe the translation in $y = x^2 - 3$.

52. Describe the reflection in $y = -x^2$.

$(-x)^2$

2-8 Graphing Linear and Absolute Value Inequa

Graph each inequality.

54. $0 - 0 < 6$

$0 < 6$

55. $0 \geq 0 + 1$

$y = \frac{2}{7}x + 1$

$0 \geq 1$

$x - 3y = 6$

$-x \quad -x$

$-3y = -x + 6$

$\frac{-3y}{-3} = \frac{-x}{-3} + \frac{6}{-3}$

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