Name **Key**

8.1 – 8.3 Review DAY TWO CYU

☑ Use when you get it right all by yourself

S Use when you did it all by yourself, but made a silly mistake

H Use when you could do it alone with a little help from teacher or peer

G Use when you completed the problem in a group

X Use when a question was attempted but wrong (get help)

N Use when a question was not even attempted

| CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Synthetic Substitution	1, 2	17	17
Function Notation	1, 2	3, 4	
Graphing equations	6	5	18 - 20
Writing equations/functions	7 - 9	10	11 - 13
Domain & Range	14 - 16		18 - 20
Creating t-charts	18 - 20		

Use the graph of the function f to find each value.

1. Find f(1). **3**

2. Find f(- 3). **-5**

3. Find all values of x such that f(x) = 0. **2, -2**
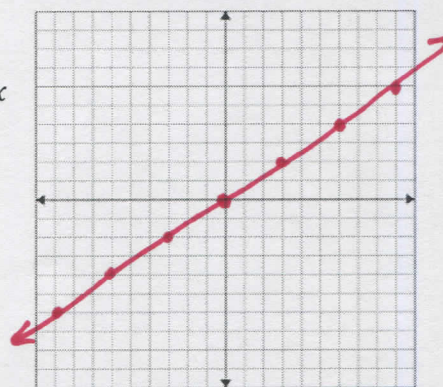
4. Find all values of x such that f(x) = 4. **0**
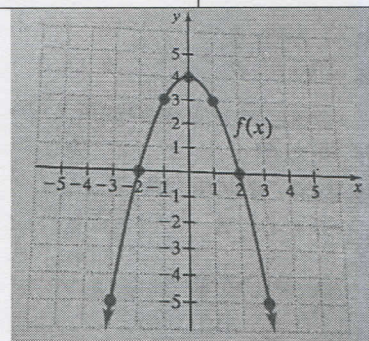
Graph each line.

5. $2x - 3y = -6$
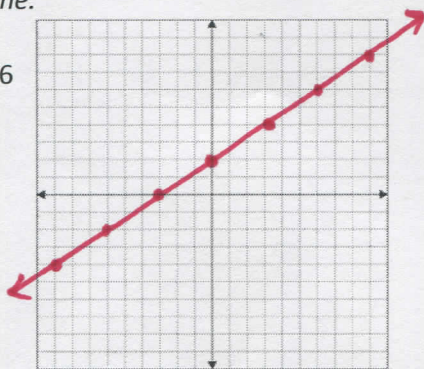
6. $f(x) = \frac{2}{3}x$

Find an equation of each line satisfying the given conditions. Write ~~in standard form~~ using function notation.

7. horizontal through (2, - 8)

$$y = -8 \qquad f(x) = -8$$

8. Through (4, -1); slope – 3

$$3x + y = 11 \qquad f(x) = -3x + 11$$

9. through (0, - 2); slope 5

$$f(x) = 5x + 2$$

10. Through (4, - 2) and (6, - 3)

$$f(x) = -\frac{1}{2}x$$

11. Through (- 1, 2); perpendicular to $3x - y = 4$

$$f(x) = -\frac{1}{3}x + \frac{5}{3}$$
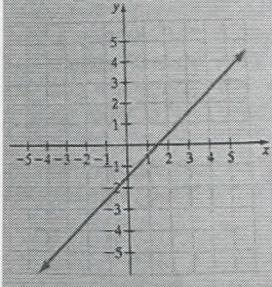
12. Parallel to $2y + x = 3$; through (3, - 2)

$$f(x) = -\frac{1}{2}x - \frac{1}{2}$$

13. Line L_1 has the equation $2x - 5y = 8$. Line L_2 passes through the points (1, 4) and (- 1, - 1). Determine whether these lines are parallel lines, perpendicular lines, or neither.
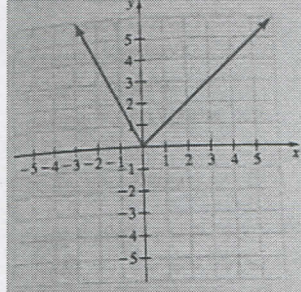
neither
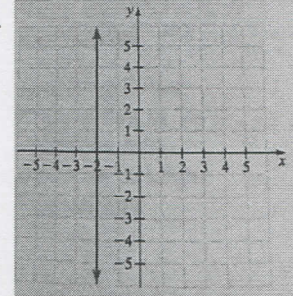
Find the domain and range of each graph. D: $(-\infty, \infty)$ R: $[0, \infty)$

14.

D:
$(-\infty, \infty)$
R:
$(-\infty, \infty)$

15.

16.

D: $[-2]$
R: $(-\infty, \infty)$

17. For the 2014 Major League Baseball season, the following linear function describes the relationship between a team's payroll x(in millions of dollars) and the number of games y that team won during the regular season. Round to the nearest whole number. $f(x) = 0.024x + 79.44$

a) According to this equation, how many games would have been won during the 2014 season by a team with a payroll of $90 million?

82 games

b) The New York Yankees had a payroll of $204 million in 2014. According to this equation, how many games would they have won during the season?

84 games

c) According to this equation, what payroll would have been necessary in 2014 to have won 95 games during the season?
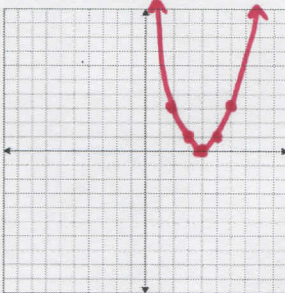
$648 million

d) Find and interpret the slope of the equation. **m = 0.024 : Every million $ spent on payroll increases winnings by 0.024 each game.**

Create a t-chart with 5 coordinates, graph the function provided, and state the domain and range in interval notation.
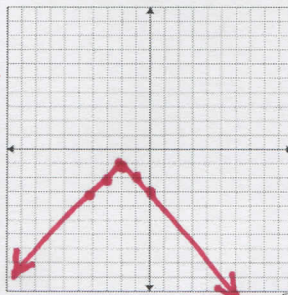
18. $f(x) = (x - 4)^2$

x	y
2	4
3	1
4	0
5	1
6	4

D: $(-\infty, \infty)$ R: $[0, \infty)$

19. $g(x) = -|x + 2| - 1$

x	y
-4	-3
-3	-2
-2	-1
-1	-2
0	-3

D: $(-\infty, \infty)$ R: $(-\infty, -1]$

20. $h(x) = \sqrt{x} - 1$

x	y
0	-1
1	0
4	1
9	2
16	3

D: $[0, \infty)$ R: $[-1, \infty)$