

## PRACTICE TEST CHAPTER 2

1. Determine whether the data set could represent a linear function.

x	1	4	7	10
f(x)	3	-2	-7	-12

2. Find the intercepts then graph.

a.  $2x + 5y = 10$

b.  $-6x + 9y = -18$

3. Write each function in slope-intercept form, then graph:  $6x + 3y = 15$

4. Write the equation of each line in slope-intercept form

a. passing through (4, 6) with slope  $\frac{1}{2}$

b. passing through (2, 6) and (3, 9)

c. through (4, -2) and parallel to  $y = \frac{3}{2}x + 9$

d. through (-3, 4) and perpendicular to  $y = \frac{3}{2}x + 9$

5. Solve for y. Graph the solution.

a.  $y > -3$

c.  $y \leq x + 3$

b.  $2x + 4y > -12$

6. A gallery offers a limited-access ticket for \$12 and a standard ticket for \$21. More than \$2520 in tickets were sold. Write and graph an inequality for the numbers of each type of ticket sold.

7. Let  $g(x)$  be the indicated transformation of  $f(x) = x$ . Write the rule of  $g(x)$ .

a. horizontal shift 8 units right

b. vertical shift 5 units up followed by a vertical stretch by a factor of 3

c. horizontal shift 3 units left followed by a vertical shift down 7 units

d. vertical shift 5 units up followed by a reflection across the x-axis

e. horizontal shift 12 units right followed by a reflection across the y-axis

8. Translate  $f(x) = |x|$  so the vertex is at the given point.

a. (-5, 7)

b. (6, -9)

9. Graph  $y \leq |x| + 2$ .

10. Perform each transformations. Then graph.

- $f(x) = |x - 4| + 1$  reflected across the y-axis
- $f(x) = |3x + 1|$  compressed vertically by  $1/3$
- $f(x) = |x - 3| + 5$  reflected across the x - axis

11. Find the following for this set of data on median income and median home price.

- Make a scatter plot of the data using median income as the independent variable.
- Find the correlation coefficient  $r$  and the line of best fit for these data.

Median Income (thousands)	69.5	46.3	56.7	65.2	54.7	59.6
Median Home Price (thousands)	130.2	94.5	115.5	106.4	98.6	115.5

12. Tell whether each ordered pair satisfies  $3x - 5y \leq 10$ .

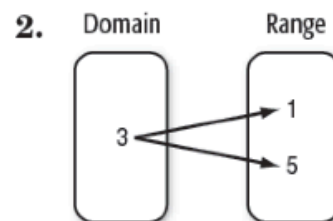
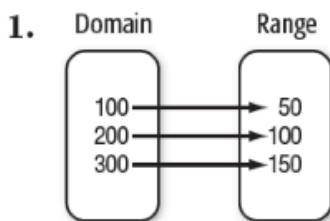
- (0, 0)
- (0, 3)
- (0, -4)
- (1, -2)

13. Write  $y = \frac{2}{5}x + 4$  in standard form where A, B and C are integers.

14. Given:  $f(x) = 3x - 2$  and  $g(x) = |-2x + 1|$ , find the value of the following

- $f(-2)$
- $f(2) + g(3)$
- $f(r + 5)$

15. Identify the domain and range. Determine whether function or not.



3.

x	y
1	2
2	4
3	6

