Chapter 7 Review

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period:\_\_\_\_\_\_\_\_\_\_\_\_\_

Simplify each expression

1. (x2)(7x8) 1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. (5a7bc2)(-6a2bc5) 2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. (-1.23)0 3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. x6y8/x2  4.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. (2a4b3/c6)0 5.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. 2xy-7/ 8x 6.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. $\sqrt[3]{1000}$ 7.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. $\sqrt[5]{3125}$ 8.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. 17281/3 9.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. (16/81)1/2 10.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. 272/3 11.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. 10,0003/4 12.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. 275/3 13.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. (1/121)3/2 14.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Solve each equation

15. 12x = 1728 15.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16. 7x-1 = 2401 16.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17. 9x-3 = 729 17.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Express each number in scientific notation

18. 0.00021 18.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

19. 58,000 19.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Express each number in standard form

20. 2.9 x 10-5 20.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

21. 9.1 x 106 21.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Evaluate each product or quotient. Express you answer in scientific notation

22. (2.5 x 103)(3 x 104) 22.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

23. 8.8 x 102/ 4 x 10-4 23.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

24. The average distance from Mercury to the Sun is 35,980,000 miles. Express this distance in scientific notation.

 24.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Graph each function. Find the y-intercept and state the domain and range

25. y = 2(5)x

y- intercept:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 domain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Range:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

26. y = -3(11)x



 y- intercept:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Domain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Range:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

27. y = 3x + 2



 y- intercept:\_\_\_\_\_\_\_\_\_\_\_\_

 Domain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Range:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

BONUS

Find the slope of the line that passes through each pair of points, then write an equation in point-slope form, slope-intercept form, and standard form.

1. (0, -2) and (-5, -4)

Slope = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Point - slope = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Slope-Intercept =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Standard = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Solve each system by graphing.

1. y = 4x + 7

 y = -3x

Solve using substitution.

1. –3x + y = -2

 y = x + 6

Solve by elimination.

1. 2x + 4y = -4

 2x + y = 8

Graph each linear inequality.

1.  y < 2x – 5