**Review** Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 4 Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class:\_\_\_\_\_\_\_\_\_

Tell whether the following relations represent a function. Why or why not? Then state the domain and range.

1. 2.

 Domain:

 Range:

Domain:

Range:

3. 4.

Domain:

Range: Domain:

 Range:

5. Write the following table as a mapping and in function notation, f(x)=a

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| x | -2 | -1 | 0 | 1 |
| f(x) | 6 | 4 | 2 | 0 |

Solve the following equations for y: {1, 3, 5, 7, 9} and z: {2, 4, 6, 8, 10} to determine the solution set

6. 3y - 10 = -4 7. 2z – 5 = 11

8. Jocelyn makes x dollars per hour working at the grocery store and n dollars per hour babysitting. Write an expression that describes her earnings if she babysat for 25 hours and worked at the grocery store for 15 hours.

If f(x) = 3x + 5 and g(x) = x2 – 4, find each value:

9. f(4) 10. f(-2) 11. g(3)

12. Find (f + g)(x) and (f - g)(x) for f(x) = 5x – 2 and g(x) = 8x + 5

13. Find (f g)(x) and (f/g)(x) for f(x) = x2 + 2x – 3, g(x) = 3x2 + 7

14. Draw a graph to represent the following situation: John leaves his house and after a few blocks is stopped at a red light. He starts going again and then stops at a stop sign. He then arrives at the grocery store and buys what he needs. He leaves the grocery store and then drives straight home without stopping.

15. Is the domain reasonable for the situation?

 Amount of money earned, f(x), as a function of hours worked (x)

 Domain: Positive Values