

### Assignment 2.3 – Linear & Exponential Functions

Write the equation of a line in slope-intercept form:  $y = mx + b$ , using the given information.

1.       $m = -7, b = 4$

2.       $(1, 7)(-3, -5)$

3.       $m = 16, b = -\frac{1}{5}$

Write the equation of the line in point-slope form:  $y = m(x - x_1) + y_1$ , using the given information.

4.       $m = 9, (0, -7)$

5.       $m = \frac{2}{3}, (-6, 1)$

6.       $(2, -5) (-3, 10)$

7.       $(-4, 8) (3, 1)$

Refresh Your Memory

Find the rate of change (slope) in each of the exercises below.

8.  $(2, 5)$   $(8, 29)$

9.  $(-3, 7)$   $(-3, 13)$

Find the rate of change.

10. A car that shifts manually gets 2 miles more per gallon of gas than a car with automatic shift.

11. The Earth experiences 50,000 earthquakes per year.

12. The Earth is hit by lightning 100 times a second.

13. Joan earns a salary of \$30,000 per year. She will get a 4.5% raise each year she is employed. Make a table, write the explicit equation, and which type of function (linear or exponential).


Explicit Equation:

Type of graph: