

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

## Concept of Functions Worksheet 1

(I)T3— 8.F.2 - Compare the properties of two linear functions represented in different ways

Score \_\_\_\_\_

Use the following information to compare the four functions.

A rate of change is a rate that describes how one quantity changes in relation to another.

**Level 2.0, Include the negatives on this section.**

### Function A

$$y = \frac{-7}{2}x + 12$$

What is the rate of change?

What is the y-intercept (initial value)?

### Function B

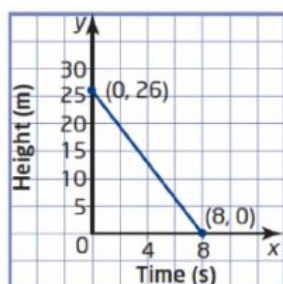
Drake rented a car from city rents, he paid an upfront fee of \$30 and \$62 a per day.

What is the rate of change?

What is the y-intercept (initial value)?

### Function C

The graph shows the height above the ground of a rock climber over time.



Use the boxes below to find the rate of change.

$$\frac{\text{Change in } y}{\text{Change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{\boxed{\phantom{00}} - \boxed{\phantom{00}}}{\boxed{\phantom{00}} - \boxed{\phantom{00}}} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

What is the y-intercept (initial value)?

### Function D

The table shows the number of textbooks in relation to the number of students.

Students	Number of Textbooks
5	15
10	30
15	45
20	60

Use the boxes below to find the rate of change.

$$\frac{\text{Change in } y}{\text{Change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{\boxed{\phantom{00}} - \boxed{\phantom{00}}}{\boxed{\phantom{00}} - \boxed{\phantom{00}}} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

What is the y-intercept (initial value)?

Think, how many books are sold to zero students?

**Level 3.0 Write the answer as FunctionG, use capitals, no spaces. Don't include any negatives.**

- a. Put the functions in order from least to greatest by rate of change.

Least 1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

Greatest 4 \_\_\_\_\_

- b. Put the functions in order from least to greatest by y-intercept (initial value).

Least 1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

Greatest 4 \_\_\_\_\_