Unit 13 – Day 3 Practice Name:

1. Your employer has offered two pay scales for you to choose from. The first option is to receive a base salary of $250 a week plus 15% of the price of any merchandise you sell. The second option is represented in the graph below. Compare the properties of the functions.



**First Option**

y-intercept:

slope:

**Second Option**

y-intercept:

slope:

a) Which function has a higher starting salary?

b) Which function has a higher commission rate?

2. Compare the properties of the functions below in terms of the problem situation:

**Rental Store B**

The table below shows the total cost in dollars to rent a steam cleaner at a different rental store, g(x) represents the total cost after x hours.



a. Which function has a higher staring price and why?

**Rental Store A**

A rental store charges $40 to rent a steam cleaner, plus an additional $4 per hour.

b. Which function has a higher rental cost per hour and why?

3. Compare the properties of the functions below in terms of the problem situation:

**Job Offer B**

She received a second job offer represented by the following equation:

f(x) = 30,000(1+ 0.02)x.

**Job Offer A**

Jazlynn received a job offer with a starting salary of $32,000 and a 1.5% increase every year.

a. Which job has a higher starting salary?

b. Which job has a higher pay increase?

4. A bicycle store has approximately 200 bicycles in stock. The store owner is considering plans for expanding its inventory.

* + Plan A: Increase by 30 bicycles per year
	+ Plan B: Increase by 10% each year

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| --- | --- |
| a. What type of function does Plan A represent?     | b. Create a function to represent Plan A:  |
| c. What type of function does Plan B represent?  | b. Create a function to represent Plan B:  |

e. When will the number of bicycles under Plan B exceed the number of bicycles under Plan A?