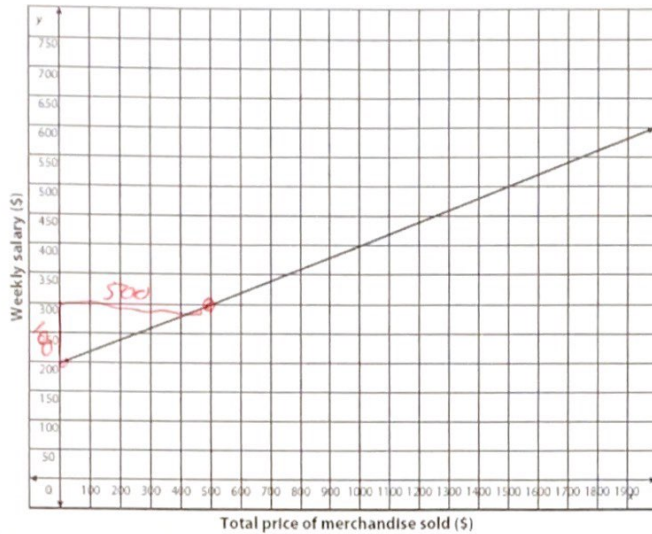


Practice Assignment

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: 250

slope: .15

Second Option

y-intercept: 200

slope: .2

$\frac{100}{500}$

a. Which function has a higher starting salary and why?

Option 1

$250 > 200$

b. Which function has a greater commission rate and why?

Option 2

$.2 > .15$

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

Rental Store A

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

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

A: $40 > 25$

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

B: $7 > 4$

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.

Hours (x)	Total Cost (g(x))
3	46
4	53
5	60
6	67

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

Job Offer A

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

Job Offer B

She received a second job offer represented by the following equation:
 $f(x) = 30,000(1 + 0.02)^x$.

a. Which function has a higher starting salary and why?

A: $32,000 > 30,000$

b. Which function has a greater pay increase rate and why?

B: $.02 > .015$
 or

2% is greater than 1.5%

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

Allatoona High School

The enrollment of Allatoona High School, $f(x)$, after x years is modeled by the function
 $f(x) = 1700(1 + 0.025)^x$.

Harrison High School

The following table shows the enrollment of Harrison High School, $g(x)$, after x years.

x	$g(x)$
0	1900
1	1872
2	1843
3	1816
4	1789

a. Which school has a higher starting population and why?

Harrison: $1900 > 1700$

$\frac{1872}{1900} = .99$

b. Which function has a greater enrollment rate and why?

Allatoona: Increasing at .025
 while Harrison is decreasing

5. Use the graph below to answer the following questions:

a. List the functions in order from least to greatest for y-intercepts:

A C B

b. Which function has the largest x-intercept?

A

c. List the functions in order from smallest to largest when $x = -4$.

B A C

d. List the functions in order from smallest to largest when $x = 0$.

C B A

e. List the functions in order from smallest to largest when $x = 2$.

C B A

f. List the functions in order from smallest to largest when $x = 5$.

B A C

g. Which graphs has the largest rate of change when x is between 4 and 5?

C

