Algebra II **Section 1.7**
Auch **Date:**

Objectives.

- Write functions using function notation.
- Evaluate and graph functions.

Vocabulary

Function Notation –

Dependent Variable –

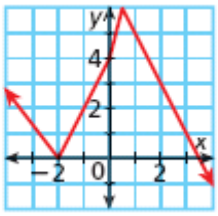
Independent Variable –

Example #1

For each function, evaluate $f(0)$, $f\left(\frac{1}{2}\right)$, and $f(-2)$.

a) $f(x) = 7 - 2x$ b) $f(x) = 4x - 3$

b)



Try it!

For each function, evaluate $f(0)$, $f\left(\frac{1}{2}\right)$, and $f(-2)$.

a) $f(x) = x^2 - 4x$ b) $f(x) = -2x + 1$

Example #2

Graph each function.

a) $\{(0,4),(1,5),(2,6),(3,7),(4,8)\}$

b) $f(x) = 3x - 1$

Make a table

x	**3x-1**	***f*(x)**
-1		
0		
1		
2		

Example #3

The Japenese bullet train that travels from Tokyo to Kyoto averages about 156 km/h. The distance from Tokyo to Kyoto is 380km.

a) Write a function to represent the distance remaining on the trip after a certain amount of time.

The time traveled is the independent variable, and the distance remaining is the dependent variable.

Distance remaining = total distance – distance traveled

$d(t) = 380 - 156t$

b) What is the value of the function for an input of 1.5, and what does it represent?

$d(1.5) = 380 - 156(1.5)$ *Substitute 1.5 for t and simplify*

$d(1.5) = 146$

The value of the function for an input of 1.5 is 146. This means that there are 146 kilometers remaining in the trip after 1.5 hours.