

pick up packet from my desk

Algebra 2 Notes Name _____
 Chapter 0 - Identifying Key Characteristics

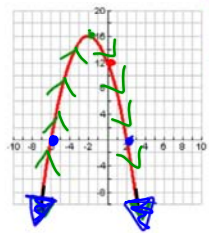
Directions: Fill in the Table below with the correct Vocabulary words from the Word Bank. Then analyze the graph to identify the key characteristics in the correct notation.

Word Bank

Domain	Decreasing interval	Intercept(s)
Range	End behavior	Intercept(s)
Increasing interval		

Vocabulary	Definition/Location	Notation
domain	All possible x-values	
range	All possible y-values	
X: intercepts	Where the graph crosses the x-axis; there may be more than one! Also represents real solutions to an equation.	
y: intercepts	Where the graph crosses the y-axis; there may be one or none	
increasing interval	As x-values increase, the y-values increase	
decreasing interval	As x-values increase, the y-values decrease	
end behavior	The behavior of the graph of $f(x)$ as x approaches positive infinity or negative infinity; determined by the degree and the leading coefficient of a polynomial	

X: intercepts:
 $(-6, 0)$ & $(2, 0)$
 y: intercept
 $(0, 12)$



D: $(-\infty, +\infty)$
 R: $(-\infty, 16]$

Ex 1 Determine the **domain** and **range** of each function. Use the correct notation.

a.

x	y
-2	6
-1	5
0	4
1	3
2	2

x Domain: $[-2, 2]$
 y Range: $[2, 6]$

b.

x Domain: $(-\infty, +\infty)$
 y Range: $(-\infty, +\infty)$

c.

x Domain: $(-\infty, +\infty)$
 y Range: $(-\infty, 4]$

d.

x Domain: $(1, +\infty)$
 y Range: $(-\infty, +\infty)$

e. $f(x) = x^2$

x Domain: $(-\infty, +\infty)$
 y Range: $[0, +\infty)$

f.

x Domain: $[-1, 11]$
 y Range: $[-1, 5]$

g.

x Domain: $(-\infty, +\infty)$
 y Range: $[2, +\infty)$

6, 7, 13

18, 26