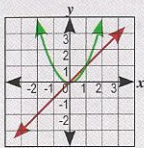


Objective 2 – Properties and Attributes of Functions

LINEAR AND QUADRATIC PARENT FUNCTIONS

Function	Equation	Function Notation	Parent Function
Linear	$y = mx + b$	$f(x) = mx + b$	$y = x$
Quadratic	$y = ax^2 + bx + c$	$f(x) = ax^2 + bx + c$	$y = x^2$

Example: graphs



variable: symbol representing a value that can change (often represented by a letter like a , x , or y)

constant: quantity or number that does not change

Example: y is dependent variable and x is independent variable in $y = 3x + 4$

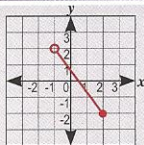
DOMAIN AND RANGE

domain: x -values; independent variable's values; "input" values

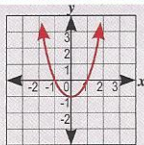
range: y -values; dependent variable's values; "output" values

closed point: point is included, ●

open point: point is not included, ○



domain: $-1 < x \leq 2$
range: $-2 \leq y < 2$



domain: all real numbers
range: $y \geq -1$

SEQUENCES, PATTERNS, AND DATA INTERPRETATION

sequence: ordered list of quantities

pattern: relationship between quantities; can use symbols to represent them

Example: $3n + 2$ describes the relationship between the term and its position, n , in the sequence 5, 8, 11, 14, 17, 20, ...

scatterplot correlation:

trend made when ordered pairs are plotted on a graph

Correlation	Positive	Negative	None
Trend Direction	upward	downward	none
Example			