# Lesson 1: Interpreting Graphs

## REAL WORLD ACTIVITY

## VOCABULARY
- Graph Review
- Graph as Chart/Table Review
- Line Graph
- Graph Practice
- Arithmetic Mean
- Greatest Number In Data Set
- Range
- Range Practice
- Median With Odd Set
- Median With Even Set
- Median Practice
- Mode
- Scatter Plot

## INSTRUCTION
- Number Line
- Ordered Pairs
- Plotting Points
- Plotting Ordered Pairs
- Line Graph
- Arithmetic Mean
- Median
- Mode
- Mean Practice
- Median Practice
- Mode Practice
- Scatter Plot
- Choose Best Graph

## TRY IT

## GAME OR SCENARIO

## TEST SKILLS
- Four Step Plan
- Question 1
- Question 2
- Question 3

## QUIZ
### REAL WORLD ACTIVITY

### VOCABULARY

- Constant
- Variable
- Expression
- Equation
- Equation Drag and Drop
- Term
- Term Rollover
- Evaluate
- Monomial
- Polynomial
- Binomials & Trinomials

### INSTRUCTION

- The difference between a constant and a variable
- The difference between an expression and an equation
- Term
- Term multiple choice
- Simplifying expressions
- Evaluating and Solving Expressions
- Translating Sentences into Equations
- Solving Equations
- Monomials, Polynomials, binomials and Trinomials

### TRY IT

### GAME OR SCENARIO

### TEST SKILLS

- Four Step Plan
- Question 1
- Question 2
- Question 3

### QUIZ
# Lesson 3: Patterns and Equations

## REAL WORLD ACTIVITY

## VOCABULARY
- Pattern, Term, Sequence, Rule
- Mathematical Expression, Variable
- Simplify, Solve
- Pictorial Model, Equation
- Pictorial Model
- Table of Values, Value, Relationship
- Graph coordinate Plane, Number Line, Origin

## INSTRUCTION
- Identifying patterns in a sequence
- Identifying patterns in a sequence
- Identifying patterns in a sequence multiple choice exercise
- Determining any term in an arithmetic sequence
- Determining any term in an arithmetic sequence MC Maria
- Solving equations using pictorial models and using symbols to record the actions
- Making a table of values from an equation
- Writing equations from tables of values
- Making a graph from an equation

## TRY IT

## GAME OR SCENARIO

## TEST SKILLS
- Four Step Plan
- Question 1
- Question 2
- Question 3

## QUIZ
## Lesson 4: Relationships

### REAL WORLD ACTIVITY

### VOCABULARY
- Relationship
- Relation, Ordered pair
- Function
- Relationship, Relation, Ordered Pair, Function
- Formula
- Ratio, Rate, Per
- Conversion Factor

### INSTRUCTION
- Describing relations
- Describing relations and functions
- Writing algebraic expressions for functions
- Generating different representations of data given another Representation of data (equations, tables, verbal descriptions)
- Graphing data to demonstrate relationships
- Using ratios to make predictions in proportional situations
- Solving rate problems using proportional reasoning
- Using conversion factors

### TRY IT

### GAME OR SCENARIO

### TEST SKILLS
- Four Step Plan
  - Question 1
  - Question 2
  - Question 3

### QUIZ
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<td>Constant and Coefficient Interaction</td>
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<td>Commutative Property Review</td>
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<td>associative Property Review</td>
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<td>Commutative Property and Associative Property Review</td>
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<td>Combining Like Terms</td>
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<td>Combining Like Terms Practice</td>
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<td>Monomial</td>
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<td>Binomial</td>
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<td>Trinomial</td>
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<td>Monomial, Binomial, Trinomial Practice</td>
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<td></td>
<td>Polynomial</td>
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<td></td>
<td>Monomial, Binomial, Trinomial, and Polynomial</td>
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</tbody>
</table>

**INSTRUCTION**

Combining Like Terms

Identifying the Associative and Commutative Properties

Classifying Polynomials

Adding Polynomials

**TRY IT**

**GAME OR SCENARIO**

**TEST SKILLS**

Four Step Plan

**QUIZ**

Question 1

Question 2

Question 3
Lesson 6: Understanding Functions

### REAL WORLD ACTIVITY

### VOCABULARY

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<tr>
<th>Term</th>
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<td>Formula</td>
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<tr>
<td>Input and Output</td>
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<tr>
<td>Function (Input- Output Concept)</td>
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<tr>
<td>Function (Cause-Effect Concept)</td>
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<td>Equation of a Function</td>
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<tr>
<td>Evaluate</td>
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<tr>
<td>Function Table</td>
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<tr>
<td>Set of Function Values</td>
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<td>Graph of a Function</td>
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<tr>
<td>Domain</td>
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<tr>
<td>Range</td>
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<tr>
<td>Independent Variable</td>
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<tr>
<td>Dependent Variable</td>
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<tr>
<td>Vertical-Line Test</td>
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<td>Relation</td>
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### INSTRUCTION

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<tr>
<td>Evaluating Functions</td>
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<tr>
<td>Identifying Domain and Range</td>
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<tr>
<td>Testing Whether Ordered Pairs Represent a Function</td>
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<tr>
<td>Testing Whether a Graph Represents a Function (Vertical-Line Test)</td>
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<tr>
<td>Making a Table of Function Values from an Equation of a Function</td>
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<tr>
<td>Drawing the Graph of a Function from a Table of Function Values</td>
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<tr>
<td>Making a Table of Function Values from the Graph of a Function</td>
</tr>
<tr>
<td>Using Functions to Model Unit Conversion</td>
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<tr>
<td>Using the Graph of a Function to Analyze Change</td>
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### TRY IT

### GAME OR SCENARIO

### TEST SKILLS

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<td>Question 3</td>
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### QUIZ
Lesson 7: Linear and Nonlinear Functions

**REAL WORLD ACTIVITY**

**VOCABULARY**

- Linear Function
- Linear Equation
- Slope
- y-Intercept
- Nonlinear Function

**INSTRUCTION**

- Identifying Linear Functions
- Identifying Slope of a Linear Function (from both graph and equation)
- Identifying y-Intercept of a Linear Function (from both graph and equation)
- Graphing a Line by Calculation Two Points on the Line Using its Equation
- Graphing a Line Using Slope and y-Intercept
- Using a Graph to Interpret Slope as a Rate of Change in a Problem Situation
- Formulating a Linear Function for a Problem Situation
- Evaluating a Quadratic Function
- Making Table of Values for \( y=x^2 \)
- Graphing \( y^2 =x \) from Table of Function Values
- Evaluating Cubic Function
- Making Table of Values for \( 6y=x^3 \)
- Graphing \( y=x^4 \) from Table of Function Values

**TRY IT**

**GAME OR SCENARIO**

**TEST SKILLS**

- Four Step Plan
- Question 1
- Question 2
- Question 3

**QUIZ**

Lesson 8: Graphing Linear Equations

**REAL WORLD ACTIVITY**

**VOCABULARY**

- Linear Equation
- Slope
- y-Intercept
- Slope-intercept form
### INSTRUCTION
- Identifying Linear Equations
- Identifying slopes from Graph
- Identifying Slopes from Equations written in slope-intercept from
- Identifying y-Intercepts from Graph
- Identifying y-Intercepts from Equation written in slope-intercept from
- Graphing a Linear Equation
- Using Graphs to Interpret Slope as a Rate of Change in Problem Situations

### REAL WORLD ACTIVITY

### VOCABULARY
- Ratio Definition and Notation
- Proportion
- Proportional Relationship
- Non-Proportional Relationship
- Proportional Relationship
- Scale

### INSTRUCTION
- Making Ratios
- Simplifying Ratios
- Solving Proportions
- Identifying Relationships as Proportional or Non-Proportional
- Using Scale

### TRY IT

### GAME OR SCENARIO

### TEST SKILLS
- Four Step Plan
- Question 1
- Question 2
- Question 3

### QUIZ

### ALGEBRA ~ FROM ABC TO XYZ

**Lesson 9: Proportional and Non-Proportional Relationships**

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### ALGEBRA ~ FROM ABC TO XYZ

**Lesson 10: Algebraic Expressions Involving Powers**

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### INSTRUCTION
- Identifying Linear Equations
- Identifying slopes from Graph
- Identifying Slopes from Equations written in slope-intercept from
- Identifying y-Intercepts from Graph
- Identifying y-Intercepts from Equation written in slope-intercept from
- Graphing a Linear Equation
- Using Graphs to Interpret Slope as a Rate of Change in Problem Situations

### TRY IT

### GAME OR SCENARIO

### TEST SKILLS
- Four Step Plan
- Question 1
- Question 2
- Question 3

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<td>INSTRUCTION</td>
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<td>Fractional Exponents: Square Root</td>
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<td>QUIZ</td>
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### Lesson 11: Inequalities

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<td>Absolute Value Review</td>
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<td>Absolute Value Practice</td>
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<tr>
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<td>Reverse</td>
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| INSTRUCTION         | Inequality Definition |
|                     | Inequality Solutions |
|                     | Inequalities on a Number Line |
|                     | Solving Inequalities: Adding |
|                     | Multiplying and Dividing with Positive Numbers |
|                     | Multiplying and Dividing with Negative Numbers |
|                     | 1-Step Inequality Practice |
|                     | 2-Step Inequalities |
|                     | Absolute Value |
|                     | Absolute Value and Inequalities |

<table>
<thead>
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<th>TRY IT</th>
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<table>
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<tr>
<th>GAME OR SCENARIO</th>
<th>Four Step Plan</th>
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<td>Question 3</td>
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| QUIZ               |            |
# Lesson 12: Graphing in the Coordinate Plane

## Real World Activity

### Vocabulary
- Coordinate Plane
- Reviewing x- and y-axis
- Reviewing Ordered Pairs
- Plotting Points
- Origin
- Ordered Pairs Interaction
- Quadrants
- Quadrant Practice
- Plot Ordered Pairs

## Instruction

### Coordinate Plane
- Parts of a Coordinate Plane
- Quadrants
- Plotting Points using Ordered Pairs or Coordinates
- Graphing Linear Equations
- Graphing a line by Plotting Points
- Graphing Equations of the form \( y = nx^2 \)
- Graphing Equation of the form
- Graphing Practice
- Graphing Inequalities

## Try It
- Graphing Inequalities

## Game or Scenario
- Four Step Plan

## Test Skills
- Question 1
- Question 2
- Question 3

## Quiz