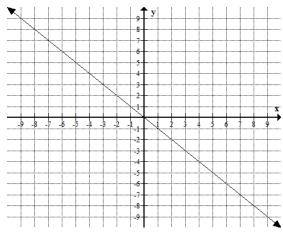
## Unit 2 Re-test

Complete the six re-test problems in the right column. Use the problems in the left column to guide you. Try solving the basic problems first then the re-test problems.

## Basic Problem with steps (solve each)

1. Which of the following equations is the parent function for the given graph?



- A. y = x
- B. y = -x
- C.  $y = x^2$
- D.  $y = x^3$

## STEPS/PLAN

Determine which parent functions do you know

- Linear
- Quadratic

Eliminate the equations that are NOT parent functions.

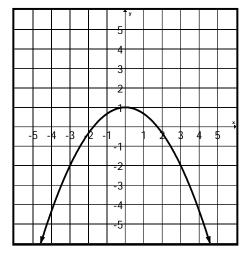
 Any equations that have a negative at the front are NOT parent functions

Decide which parent function your graph looks like

- a line
  - o choose: linear or y=x
- a U?
  - o choose: quadratic or y=x2

## Re-test problem to

1. Which equation is the parent function of the graph represented below?



- A. y = x
- B. **y=-X**
- C.  $y = -x^2$
- $y=x^2$

<ul> <li>2. Which of the following equations can be used to find the measure of two complementary angles, where the measure of one angle is 7 less than twice the other?</li> <li>A. 3x - 7 = 90</li> <li>B. 7 - x = 90</li> <li>C. 2x - 7 = 90</li> <li>D. 2x = 90</li> </ul>	Determine what the angles should add up to be:  • Complementary = 90  • Supplementary = 180  Draw a picture!  Divide the angle into two parts.  Write the expression for each angle.  Write the equation for BOTH angles.  Combine like terms.	2. Two angles are supplementary. One angle measures 10 more than three times the other angle. Write an equation that can be used to find the measure of each angle.  Output  Description:
3. Solve the following equation for y: $\frac{3x - y}{2} = -3$ A. $y = -3x - 6$ B. $y = 3x + 6$ C. $y = -3x + 6$ D. $y = 3x + 3$	Box the variable you need to solve for.  Use inverse operations to get the variable by itself.  If there is a negative in front of the variable, change all signs for every part of the equation.	3. Solve the following equation for b. $a - \frac{1}{3}b = c$

4. Evaluate the following expression for x = -9.

$$x^2 + 2x + 64$$

Change the variable to parenthesis.

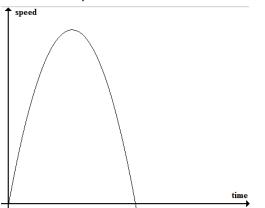
Plug in the value for the variable into the parenthesis.

Use your calculator to find the answer.

4. Evaluate the following expression for x=-3

$$x^2 - 3x + 2$$

5. The graph below best represents which of the following relationships between speed and time elapsed?



- A. Carol rides her bike steadily up the street and then takes a break and then quickly rides back
- B. A woman climbs a hill at a steady pace and then starts to run down one side.
- C. Mike runs up a hill and then runs back down the hill.
- D. Bill rode his bicycle down a hill and then slowly came to a stop.

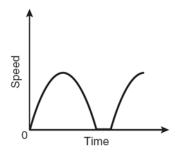
Determine what two variables are being compared.

Separate your graph into pieces and determine what is happening.

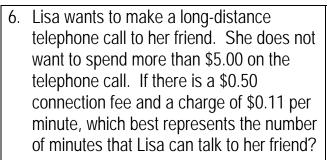
Look at each answer choice carefully, and write what is happening above each section.

Choose the answer that matches your graph.

5. The graph below best represents which of the following relationships between speed and time elapsed?



- A. Ashley increased her speed as she took off from a stoplight. When she saw the next stoplight, she decreased her speed until she came to a complete stop.
- B. A roller coaster climbs a large hill. When it gets to the top, it speeds down, passes through the station and then goes up another hill.
- C. John took off from a stoplight. He was able to increase his speed until he came to another stoplight and decreased his speed quickly. He came to a stop and when the light turned green, he increased his speed again.
- D. Bobbie took from a stoplight and increased her speed. When she saw the next stoplight, she slowed down. As she approached the light, it turned green so she increased her speed again.



Highlight or underline important information.

Write an inequality to match the situation.

Solve the inequality to find what values will work for the problem.

Match your answer with one that is provided.

6. The county water department charges a monthly administrative fee of \$10.40 plus \$0.59 for each gallon of water used. Glen's family always pays no more than \$135 each month for water. Write, solve, and graph an inequality to best represent the number of gallons of water, *g*, Glen's family uses each month?





