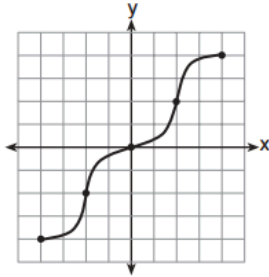1) Marcy determined that her father's age is three times the difference of her age and 4. If x represents Marcy's age, which expression represents her father's age?

(1) $3x - 4$

(3) $4x - 3$

(2) $3(x - 4)$

(4) $4 - 3x$
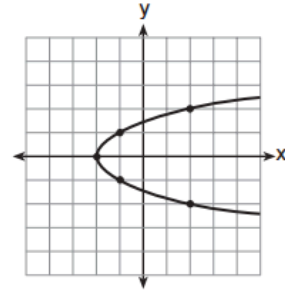
#2-5: State the domain and range for each relation.

2)

Function? YES NO

Domain: Range:

[-4, 4]   [-4, 4]

4) In the graph of 3) above, find $f(1)$.

3)

Function? YES NO

Domain: Range:

(-2,∞)   (-∞, ∞)

5) Determine and state the slope of $y - 3x = 6$.

6: Given two points, determine the slope of the line containing those two points. Then write the equations of the lines through the 2 points in any form.   (2, 3) and (-2, -3)

7) Explain how the graph of $g(x) = |x|$ is transformed to $h(x) = 2|x - 2| + 3$.

Transform each equation to slope-intercept form. Then graph each line on the same set of axes (below).

8) $3x - 4y = 12$
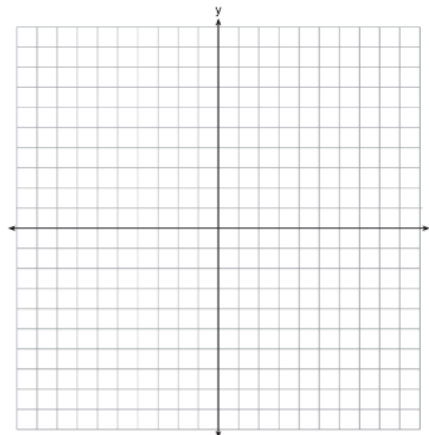
9) The function $c(s) = 20 + 10s$ represents the cost c (in dollars) of taking Amtrak s stations.

a) Find $c(10)$ and explain what this means in context.   b) Find s such that $c(s) = 70$

10)

In the equation $A = p + prt$, t is equivalent to

1) $\dfrac{A - pr}{p}$

2) $\dfrac{A - p}{pr}$

3) $\dfrac{A}{pr} - p$

4) $\dfrac{A}{p} - pr$

11) Which interval notation describes the set $\{x \mid 1 \leq x \leq 10\}$
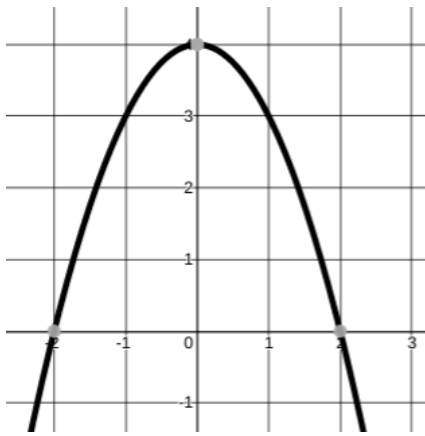
(1) $[1, 10]$ (3) $[1, 10)$

(2) $(1, 10]$ (4) $(1, 10)$

12) For the following identify the parent function, the transformation, and the domain and range.

13) For each of the following interpret the slope and intercept:

A. $f(x) = 2x + 3$ **f(x) represents blocks from home and x represents minutes walking. Also find and interpret $f(10)$. Solve and interpret $f(x) = 19$**

B. $y = 30x + 40$ y represents score on a test and x represents hours studying.

C. $y = -2x + 30$ y represents blocks from home and x represents minutes.

Use the following figure to answer the questions that follow.

B

1 2

C   A   D
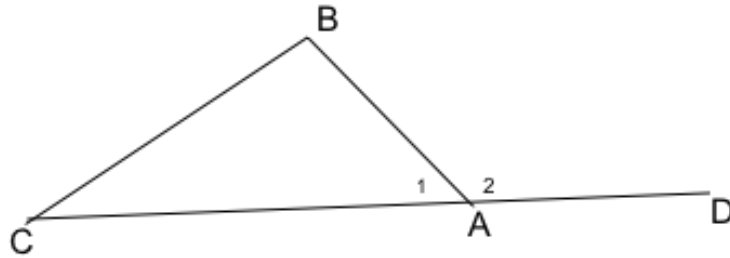
If m∠C = 30° and m∠B = 100°, what is the m∠1? _____ m∠2? _____

What is the shortest way to get from C to A?   What does that imply about AB + BC?

If m∠C = 28° and m∠B = 94°, what is the m∠1? _____ m∠2? _____

What is the relationship between m∠C and m∠B and m∠2?

How do you know this relationship will always be true?

What is the relationship between AB and BC and AC?

How do you know this relationship will always be true?

The Exterior Angle Theorem:

The Triangle Inequality:

B

1 2

C   A   D

Example: m∠C = 24° and m∠2 = 130°, m∠B = _____

BC = 8, AC = 12, what is the range of values for AB?

_____< AB < _____