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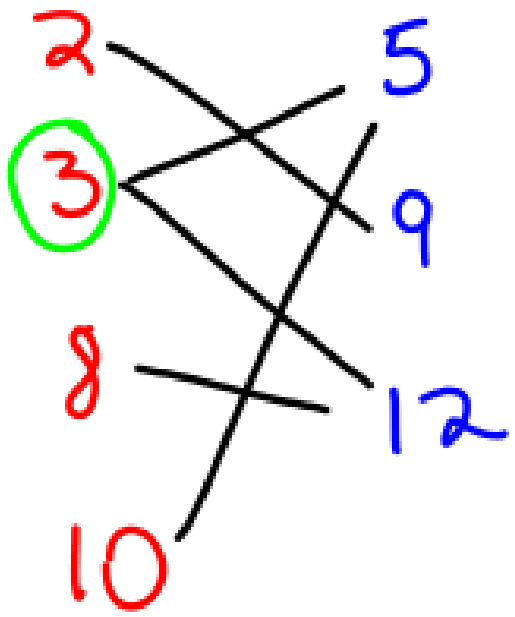

Not a function.
Input #3 has two outputs.

Chapter 9-1 Notes Day 2 - Functions

Function Rule: describes the operation(s) performed on the input (x) to get the output (y).

Example: $y = 4x + 2$ Function Rule is multiply by 4, then add 2.

Functions can be written in two forms.

1) Equation $y = 3x - 5$
2) Function Form $f(x) = 3x - 5$

Both y and f(x) represent the dependent variable.
Example: f(3) means what is the value of the dependent variable f(x) when independent variable x = 3.

Evaluate. If f(x) = 6x - 3, find each function value.

1) x = 4

$f(x) = 6(4) - 3$

$f(x) = 21$

2) f (-5)

$f(x) = 6(-5) - 3$

$f(x) = -33$

Evaluate. If $g(x) = -3x + 7$, find each function value.

3) $g(9)$

4) $g(-4)$

Evaluate. If $g(x) = -3x + 7$, find each function value.

3) g(9)

means $x = 9$

$g(x) = -3(9) + 7$

$g(x) = -27 + 7$

$g(x) = -20$

$(9, -20)$

4) g(-4)

means $x = -4$

$g(x) = -3(-4) + 7$

$g(x) = 12 + 7$

$g(x) = 19$

$(-4, 19)$

5) The Smith family spent $215 to have their family portrait taken. The photo package was $125 and the photographer charges a $15 sitting fee per person.

a. Identify the independent and dependent variables in the problem.

b. Write a function (equation) to represent the total cost of any number of people in the portrait.

c. Use the function to find how many people were in the Smith Family Portrait.

a. The cost (c) is dependent on the the number of people in the photo (p).
cost (c) = dependent variable
the number of people (p) = independent variable

b. cost (people) = 125 + 15p or c(p) = 125 + 15p

Part C on next slide.

$$c(p) = 125 + 15p$$

$$215 = 125 + 15p$$

$$90 = 15p$$

$$6 = p$$

There are 6 people in the Smith Family.