Agenda

Homework:

- Function Notation Summary
  - Include your own example of a function in real life and write it in function notation.

Materials:

- Notebook
- Algebra Packet

Do Now:

1. Take out homework (Packet pg. 17-18)
2. Complete Summary for pg. 12 notes
3. Compare homework with a homework partner

Homework Check

Set up Cornell Notes

- **Topic:** Function Notation
- **EQ:** Explain function notation and how to evaluate and describe its meaning in context.

Equations Pre-Test

- Q5
- Q7
- Q9
- Q10

5. $12 = 6 - 5x + 3x$

A. 3 B. -0.75

C. -7 D. -3

7. $-3(3x - 2) = -30$

A. $-4.1\overline{6}$ B. -4

C. 4 D. $2.\overline{6}$

9. $9 - 4x = -7x + 3 + 2x$

A. 2 B. -2

C. $-1.\overline{3}$ D. -6

10. $-2(x+2) = 2 - 3x$

A. 6 B. 0.4

C. -3 D. 0

The Four Representations of a Function

1. In Context – word problem
2. Symbollically – equation
3. Graphically – coordinate graph
4. Table – x,y table

x	$-2(x)+50$
-2	54
-1	52
0	50
1	48

What does “input” and “output” mean?

- The number you plug **IN** is the ***input*** (x-value on a graph).
- The result that comes **OUT** is the ***output*** (y-value on a graph).

*For now, let’s call the **rule** our **FUNCTION**

What does “input” and “output” mean?

- Input = Independent Variable
  - What affects the outcome
- Output = Dependent Variable
  - The outcome that is affected when you change the input

Example: School meal accounts

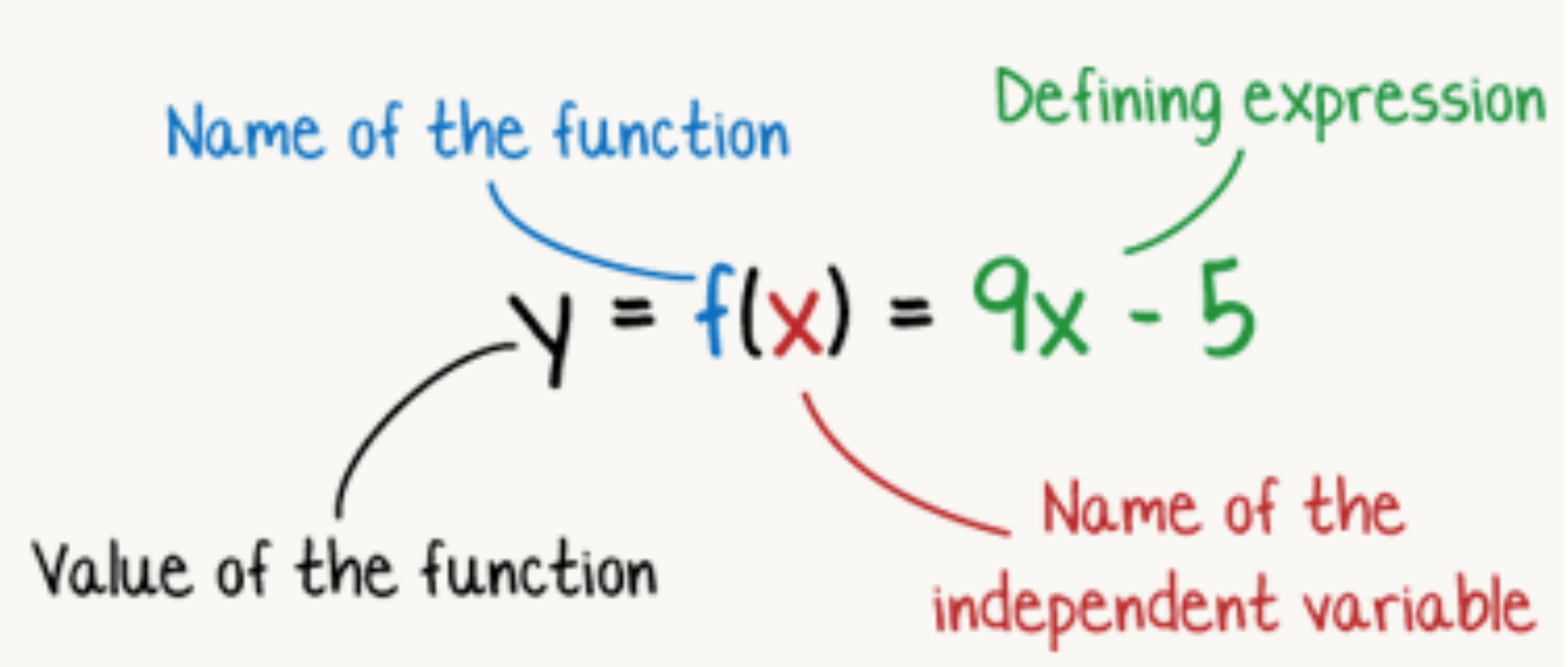
Input: Amount of money in account

Output: Number of lunches you can buy

What are other names for input and output of a function?

Input	Output
X	Y
Independent variable	Dependent variable
Domain*	Range*

Explain the parts of function notation



Important:

- f(x) is read “f of x”
- It means the function f depends on the variable x.
- It is NOT f times x

How do you determine the meaning of a function IN CONTEXT?

- **Example:** Let's go back to our school lunches example from the previous slide. Create a function that will determine the amount of lunches you can buy based off of how much money you have in your account.

$$L(m) = \frac{m}{2.75}$$

The amount of lunches you can buy, which is based off of how much money you have in your account, can be calculated by dividing your account money by 2.75 (the cost of each lunch)

How do you find the "value" of a function?

- Example: Find the function value f(2) if f(x) = 4x + 3

$$f(2) = 4(2) + 3$$

$$f(2) = 8 + 3$$

$$f(2) = 11$$

x	4x + 3	f(x)
2	4(2) +3 = 8 + 3 = 11	11
1		
0		
-1		