Warm-Up 1/9/18

1. Gina is making fresh tomato juice. The number of tomatoes she has determines how much juice she can make.

t = the number of tomatoes Gina has I
a = the amount of juice Gina can make D

Which of the variables is independent and which is dependent?

2. Evaluate f(x) = 2x – 6, for f(3)

3. Given f(x) = 2x - 6,
find x when f(x) = 8

4. ***C*** represents the cost of buying a car and ***m*** represents the number of months that you must pay for the car. Write a function rule that represents the total cost of a car where you put a $5,000 down payment (flat fee) with monthly payments of $250.

② $f(3) = 2(3) - 6$

$f(3) = 6 - 6$

$f(3) = 0$

③ $y = 2x - 6$

$+6 \quad +6$

$\frac{14}{2} = \frac{2x}{2}$

$x = 7$

④ $C(m) = 250m + 5000$

Agenda for Today 1/9/18

1. Warm-Up
2. Independent & Dependent Variables
3. HW Review: Functions Practice, Relations & Functions
4. What is a Function Worksheet (CW/HW)
5. Odd & Even Functions

Standard: 1/9/18

MGSE9-12.F.IF.2

Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.

Opening: 1/8/18

Dependent and Independent Variables

1.

For a business meeting, Oliver is making copies of his presentation. The number of copies Oliver will have to make is dependent upon the number of people who plan to attend.

c = the number of copies
p = the number of people who plan to attend

Which of the variables is independent and which is dependent?

c is the independent variable and p is the dependent variable

p is the independent variable and c is the dependent variable ✓

2.

Mr. Keller has several grandchildren, some of whom have outgrown their winter coats. He will be buying new coats for those who outgrew their old ones.

n = the number of new coats Mr. Keller will purchase
o = the number of grandchildren who have outgrown their coats

Which of the variables is independent and which is dependent?

- n is the independent variable and o is the dependent variable
- o is the independent variable and n is the dependent variable ✓

3.

For a party, Avery made a pan pizza from scratch. The number of squares she cuts the pizza into will depend on the number of people attending the potluck.

s = the number of squares Avery cuts the pizza into
p = the number of people attending the potluck

Which of the variables is independent and which is dependent?

- p is the independent variable and s is the dependent variable ✓
- s is the independent variable and p is the dependent variable

4.

Paul is getting ready for a hike. The number of hours he expects to be gone will affect how many snacks Paul packs.

h = the number of hours Paul expects to be gone
s = the number of snacks Paul packs

Which of the variables is independent and which is dependent?

- h is the independent variable and s is the dependent variable ✓
- s is the independent variable and h is the dependent variable

5.

Gina and Layla are going on vacation and are trying to figure out how much money they should bring with them. The longer the vacation, the more money they should bring.

t = the length of Gina and Layla's vacation
m = the amount of money Gina and Layla should bring

Which of the variables is independent and which is dependent?

- t is the independent variable and m is the dependent variable ✓
- m is the independent variable and t is the dependent variable

6.

Jeff is purchasing watermelons for a watermelon-eating contest at his company picnic. The number of people who have entered the contest determines how many watermelons Jeff will purchase.

p = the number of people who have entered in the contest
w = the number of watermelons to be purchased

Which of the variables is independent and which is dependent?

w is the independent variable and p is the dependent variable

p is the independent variable and w is the dependent variable ✓

7.

Debbie is making fancy headbands to sell at a craft fair. The number of headbands she can make is limited by the amount of ribbon she has on hand.

h = the number of headbands Debbie can make
r = the amount of ribbon Debbie has on hand

Which of the variables is independent and which is dependent?

- r is the independent variable and h is the dependent variable ✓
- h is the independent variable and r is the dependent variable

8.

Danny is going to hang up clean shirts in the closet. The number of empty hangers he needs will depend on how many clean shirts there are.

h = the number of empty hangers
s = the number of clean shirts

Which of the variables is independent and which is dependent?

h is the independent variable and s is the dependent variable

s is the independent variable and h is the dependent variable ✓

HW Assignment

Functions Practice Worksheet

Due on Monday 1/8/18

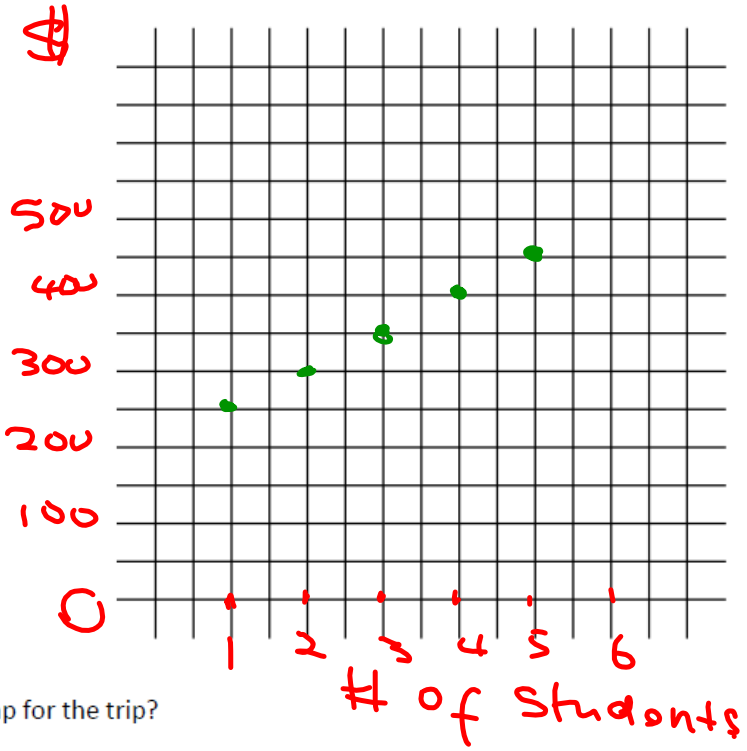
Home Work Review

A school is going on an overnight trip to Camp Coyote. The school must pay a flat fee, plus an additional cost per student staying overnight. This table shows C(x), the total cost of the trip in dollars for x, the total number of students staying overnight.

x	1	2	3	4	5
C(x)	250	300	350	400	450

$y = mx + b$ $y = 50x + b$

10. Plot the points on a graph.



11. Should you connect the dots? Explain.

No, the input is discrete.

12. C(3) = 350

13. What does C(3) represent?

Total cost of trip for 3 students

14. Find x such that C(x) = 300. 2

15. Find x such that C(x) = 150.

$x = -1$

16. What is the flat fee charged by the camp for the trip?

$200

$250 = 50(1) + b$

$250 = 50 + b$

$250 - 50 = b$

$200 = b$

15

$150 = 50x + 200$

$-200 \qquad -200$

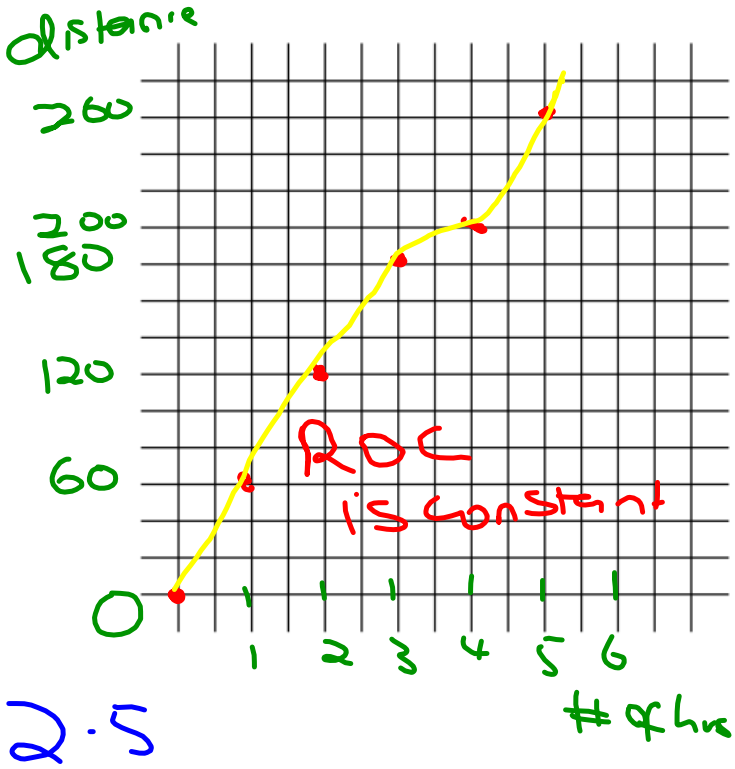
$\frac{-50}{50} = \frac{50x}{50}$

$x = -1$

Sally is going on a road trip from Atlanta to Florida. The table below tells us the total distance she has traveled, d(t), in t hours.

t	0	1	2	3	4	5
d(t)	0	60	120	180	200	260

17. Plot the data on a graph.



18. Should you connect the dots? Explain.

Yes because the input variable (hrs) is continuos.

19. d(4) = 200

20. What does d(4) represent?

Total distance travelled in 4 hrs.

21. Find t such that d(t) = 120. 2

22. Find t such that d(t) = 150. = 2.5

23. Describe how the distance traveled changed over time. What may have influenced any discrepancies?

$m = 60 \quad b = 0$

$y = 60x$

$\frac{150}{60} = \frac{60x}{60}$

$x = 2.5$

Attachments

Functions notation.ppt

Functions Practice HW.docx

Functions notation notes.ppt

Even Odd Functions Notes.pptx

Functions - End Behavior.ppt