

American Math 6th Grade HW 21;**Independent and Dependent Variables, Writing Equations**

Name the *dependent variable* and the *independent variable* in each problem.

1. A food service worker earns \$17 per hour. How much money, m , does the worker earn on a shift of h hours?

Dependent variable: _____; independent variable: _____

2. A large 2-topping pizza, L , costs \$4 more than a medium 3-topping pizza, M .

Dependent variable: _____; independent variable: _____

The table shows the electric current produced by a solar cell in different amounts of sunlight (light intensity). Answer the questions using the data.

Light intensity	40	120	180	240	320	360
Current	10	30	45	60	80	90

3. What is the dependent variable? _____
4. What is the independent variable? _____

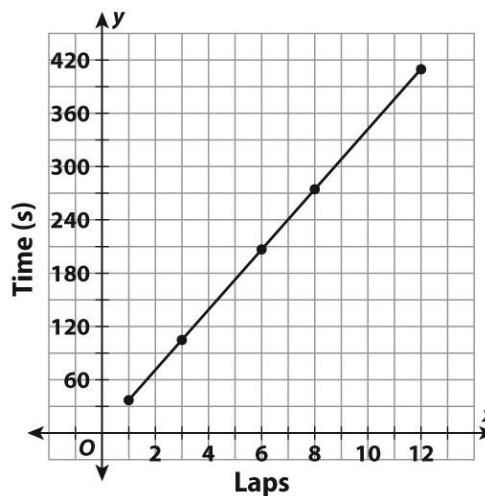
5. What do you predict the current will be in the absence of sunlight? Explain.

6. What do you predict the current will be if the light intensity is 1,000? Explain. Show your work.

A race car driver's time in seconds to complete 12 laps is plotted on the graph.

7. Which axis shows the dependent variable?

8. Why does the graph begin at $x = 1$?



Write an equation to express y in terms of x . Use your equation to complete the table. Show your work.

9.

x	1	2	4	5	8
y	1	4	16	25	

10.

x	1	2	3	4	6
y	5	8	11		

11. $F = \frac{9}{5}C + 32$ is an equation that models the relationship in the table.

Equivalent Temperatures					
Celsius, ($^{\circ}\text{C}$)	-15	-10	-5	0	5
Fahrenheit, ($^{\circ}\text{F}$)	5	14	23	32	41

What is the temperature in $^{\circ}\text{F}$ when it is 20°C ? Show your work.

_____.

Is the ordered pair (30, 86) a solution for the equation? Show your work.
