

Warm Up!

- 1.) Write in agenda book
- 2.) Place homework on desk
- 3.)

$$6\frac{3}{7} \div 2\frac{1}{4}$$

$$5\frac{45}{7} \times \frac{4}{9} = \frac{20}{7} = 2\frac{6}{7}$$

Mar 2-8:53 AM

Lesson 12.2: Independent and Dependent Variables in Tables and Graphs

Learning Target: I can identify independent and dependent quantities from tables and graphs.

Mar 2-8:55 AM

Many real world situations involve two variable quantities in which one quantity depends on the other. The quantity that depends on the other quantity is called the dependent variable, and the quantity it depends on is called the independent variable.

In math, the independent variable is usually shown on the x-axis

*Think that the i is a small letter like the x is a small letter

The dependent variable is usually shown on the y-axis

*think d and y, both have a long part to their letter.

Mar 2-8:56 AM

Identifying Independent and Dependent Variables from a Table

| | | | | |
|-----------------|---|----|-----|-----|
| Time x (h) | 0 | 1 | 2 | 3 |
| Distance y (mi) | 0 | 50 | 100 | 150 |

- 1.) What are the two quantities in this situation? time and distance
- 2.) What is the independent variable? time
- 3.) What is the dependent variable? distance
- 4.) How far does the train travel each hour? 50 mi

Write this as an equation.
 $y = 50x$

Mar 2-8:57 AM

Identifying Independent and Dependent Variables from a Graph

1.) What are the two quantities?
Clay bought + clay available

2.) What is the independent variable?
Clay bought

3.) What is the dependent variable?
Clay available

4.) Write this as an equation.
 $y = x + 20$

| | | | |
|---|----|----|----|
| x | 0 | 10 | 20 |
| y | 20 | 30 | 40 |

Mar 2-8:58 AM

A boat rental shop rents paddle boards for a fee plus an additional cost per hour. The cost of renting for different numbers of hours is shown in the table.

| | | | | |
|--------------|----|----|----|----|
| Time (hours) | 0 | 1 | 2 | 3 |
| Cost (\$) | 10 | 11 | 12 | 13 |

What is the independent and dependent variable?
 How do you know?

Mar 2-8:59 AM

A car travels at a constant rate of 60 miles per hour. Complete the table.

| | | | | |
|-----------------|---|----|-----|-----|
| Time x (h) | 0 | 1 | 2 | 3 |
| Distance y (mi) | 0 | 60 | 120 | 180 |

What is the independent variable, and what is the dependent variable?

Write an equation.
 $y = 60x$

Describe how the independent variable is related to the value of the dependent variable.


Mar 2-9:02 AM

Ty borrowed \$500 from his parents. The graph shows how much he owes them each month if he pays back a certain amount each month.

a. Describe the relationship between the number of months and the amount Ty owes. Identify an independent and dependent variable and explain your thinking.

b. How long will it take Ty to pay back his parents?

Mar 2-9:27 AM



Error Analysis A discount store has a special: 8 cans of juice for a dollar. A shopper decides that since the number of cans purchased is 8 times the number of dollars spent, the cost is the independent variable and the number of cans is the dependent variable. Do you agree? Explain.

Mar 2-9:25 AM

Khan Academy

- 1.) Independent versus dependent variables
- 2.) Quadrants on the coordinate plane

When done, show Mrs. Sines your scores. Then you are to work on ALEKS. I suggest working on topics related to Graphing, equations or inequalities.

Mar 2-9:04 AM



Feb 25-1:36 PM