Independent and Dependent Variables

Writing Equations and Creating Tables

Directions: Identify the dependent and independent variables for each scenario. Write an equation to represent the relationship between variables. Finally, complete a table showing the constant relationship.

1. Charlotte reads for 30 minutes each day. Let *t* represent the total number of minutes she reads, and *d* represent the number of days. Determine the dependent and independent variables, write an equation to represent this relationship, and then complete the table to show Charlotte's reading for 1 week.

Dependent variable:

Number of Days

Total Mins. Read



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2. Juan is shopping for school supplies. He bought a pencil case for \$5.00, but now he needs pencils to go inside it. Each box of pencils is \$3.00. Let *t* represent the total cost, and *b* represent each box of pencils. Determine the dependent and independent variables, write an equation to represent this relationship, and then complete the table to show the total cost with 1 to 5 boxes of pencils.

Equation: _____

Number of Boxes of Pencils	Total Cost
ь	3 <i>b</i> + 5 or <i>t</i>

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3. Monica goes for a 60 minute bike ride each day in the summer. Let *d* represent the number of days Monica rides her bike, and *m* represent the total number of minutes she spends riding her bike. Determine the dependent and independent variables, write an equation to represent this relationship, and then complete the table to show how many minutes Monica would ride her bike over the course of 1 week.

Dependent variable:	
Independent variable:	
Equation:	



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represent the total cost of the ride, and m represent the number of miles driven. Determine the dependent and independent variables, write an equation to represent this relationship, and then complete the table to show the total cost for riding 3 to 10 miles.

Dependent variable:
Independent variable:
Equation:

ANSWER KEY

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1. Dependent variable: total minutes read (*)

Independent variable: <u>number of days (d)</u>

2. Dependent variable: ____total cost (f)

number of

Independent variable: boxes of pencils (b)

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4	240
5	300
6	360
7	420

6	15.00
7	16.50
8	18.00
9	19.50
10	21.00