Unit 6 Lesson 19: Tables, Equations, and Graphs, Oh My!

1 Matching Equations and Tables

Student Task Statement

Match each equation with a table that represents the same relationship. Be prepared to explain your reasoning.

$S - 2 = T$ $G = J + 13$ $P = I - 47.50$ $C + 273.15 = K$

$e = 6s$ $m = 8.96V$ $y = \frac{1}{12}x$ $t = \frac{d}{2.5}$

$g = 28.35z$

Table 1:

independent variable	dependent variable
20	8
58.85	23.54
804	321.6

Table 2:

independent variable	dependent variable
5	18
36	49
75	88

Table 3:

independent variable	dependent variable
2.5	22.4
20	179.2
75	672

Table 4:

independent variable	dependent variable
20	$1\frac{2}{3}$
36	3
804	67

Table 5:

independent variable	dependent variable
58.85	11.35
175.5	128
804	756.5

Table 6:

independent variable	dependent variable
2.5	275.65
20	293.15
58.85	332

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Table 7:

independent variable	dependent variable
5	3
20	18
36	34

Table 8:

independent variable	dependent variable
2.6	73.71
20	567
36	1,020.6

Table 9:

independent variable	dependent variable
2.6	15.6
36	216
58.85	353.1

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2 Getting to Know an Equation

Student Task Statement

The equations in the previous activity represent situations.

- $S - 2 = T$ where S is the number of sides on a polygon and T is the number of triangles you can draw inside it (from one vertex to the others, without overlapping)
- $G = J + 13$ where G is a day in the Gregorian calendar and J is the same day in the Julian calendar
- $P = I - 47.50$ where I is the amount of income and P is the profit after $47.50 in expenses
- $C + 273.15 = K$ where C is a temperature in degrees Celsius and K is the same temperature in Kelvin
- $e = 6s$ where e is the total edge length of a regular tetrahedron and s is the length of one side
- $m = 8.96V$ where V is the volume of a piece of copper and m is its mass
- $y = \frac{1}{12}x$ where x is the number of eggs and y is how many dozens that makes
- $t = \frac{d}{2.5}$ where t is the amount of time it takes in seconds to jog a distance of d meters at a constant speed of 2.5 meters per second
- $g = 28.35z$ where g is the mass in grams and z is the same amount in ounces

Your teacher will assign you one of these equations to examine more closely.

1. Rewrite your equation using words. Use words like product, sum, difference, quotient, and term.

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2. In the previous activity, you matched equations and tables. Copy the values from the table that matched your assigned equation into the first 3 rows of this table. Make sure to label what each column represents.

independent variable: _____	dependent variable: _____
60	
	300

3. Select one of the first 3 rows of the table and explain what those values mean in this situation.

4. Use your equation to find the values that complete the last 2 rows of the table. Explain your reasoning.

5. On graph paper, create a graph that represents this relationship. Make sure to label your axes.

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3 Sharing Your Equation with Others

Student Task Statement

Create a visual display of your assigned relationships that includes:

- your equation along with an explanation of each variable
- a verbal description of the relationship
- your table
- your graph

If you have time, research more about your relationship and add more details or illustrations to help explain the situation.

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