

Unit 2 Lesson 3: Writing Equations to Model Relationships (Part 2)

1 Finding a Relationship (Warm up)

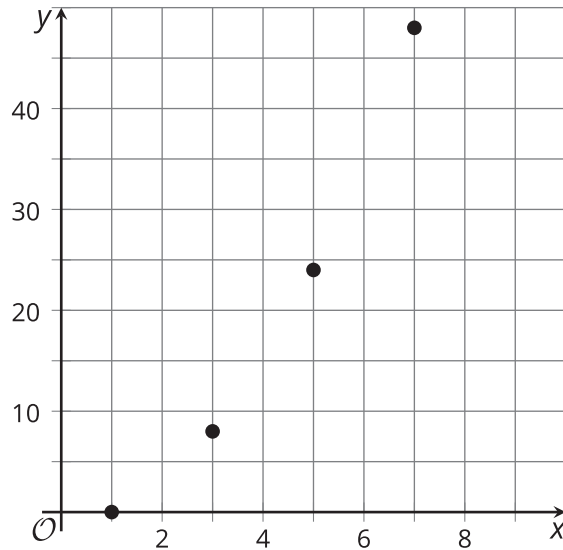
Student Task Statement

Here is a table of values. The two quantities, x and y , are related.

x	y
1	0
3	8
5	24
7	48

What are some strategies you could use to find a relationship between x and y ? Brainstorm as many ways as possible.

Activity Synthesis



2 Something about 400

Student Task Statement

1. Describe in words how the two quantities in each table are related.

◦ Table A

number of laps, x	0	1	2.5	6	9
meters run, y	0	400	1,000	2,400	3,600

◦ Table B

meters from home, x	0	75	128	319	396
meters from school, y	400	325	272	81	4

◦ Table C

electricity bills in dollars, x	85	124	309	816
total expenses in dollars, y	485	524	709	1,216

◦ Table D

monthly salary in dollars, x	872	998	1,015	2,110
amount deposited in dollars, y	472	598	615	1,710

2. Match each table to an equation that represents the relationship.

- Equation 1: $400 + x = y$
- Equation 2: $x - 400 = y$
- Equation 3: $x + y = 400$
- Equation 4: $400 \cdot x = y$

3 What are the Relationships?

Student Task Statement

1. The table represents the relationship between the base length and the height of some parallelograms. Both measurements are in inches.

base length (inches)	height (inches)
1	48
2	24
3	16
4	12
6	8

What is the relationship between the base length and the height of these parallelograms?

2. Visitors to a carnival are invited to guess the number of beans in a jar. The person who guesses the correct number wins \$300. If multiple people guess correctly, the prize will be divided evenly among them.

What is the relationship between the number of people who guess correctly and the amount of money each person will receive?

3. A $\frac{1}{2}$ -gallon jug of milk can fill 8 cups, while 32 fluid ounces of milk can fill 4 cups.

What is the relationship between number of gallons and ounces? If you get stuck, try creating a table.