Writing y = rx

Find r first, then write y = rx with that number. Multiply to go forward, divide to go back. Use letters from the story when they help.

Name _____ Date _____

Words we use say the math word, then the plain English

WORD	PLAIN ENGLISH	WHAT YOU DO
Equation	A math sentence with an equals sign.	Read y = rx as output equals unit rate times input.
Variable	A letter that stands for an amount that can change.	Pick letters that match the story: c for cost, g for gallons.
y = rx	Output equals unit rate times input.	Multiply to go forward; divide by r to go back.
r	The unit rate, the number that never changes.	Find it from a table, a graph, words, or the number next to x.

Part A Write the equation

GIVEN	R	EQUATION
Tickets cost $7.50 each (c, t)		
Table: 2 hours $16, 5 hours $40 (y, x)		
Graph through (1, 4) and (3, 12) (y, x)		
Gas is $3.20 a gallon (c, g)		
The afternoon drive is 1.5 times the morning m; total time t		

Part B Use the equation

1. c = 3.20g. Find the cost of 12 gallons. Then find how many gallons $48 buys.

2. y = 8x. Find y when x = 7. Find x when y = 56.

3. t = 2.5m. The morning drive is 40 minutes. How long is the whole day?

4. y = 1.25x. What is the unit rate? Find y when x = 8.

Part C Exit ticket

1. Tickets cost $7.50 each. Write the equation and find the cost of 6 tickets.

2. In y = rx, what does each letter stand for?

3. Gas is c = 3.20g. How many gallons does $48 buy?

Answer key

Part A. 7.50, c = 7.50t. 8, y = 8x. 4, y = 4x. 3.20, c = 3.20g. 2.5, t = 2.5m.

Part B. 1. $38.40; 15 gallons. 2. 56; 7. 3. 100 minutes. 4. 1.25; 10.

Part C. 1. c = 7.50t; $45. 2. y output, x input, r the unit rate. 3. 15 gallons.