LESSON MAKER PRO

Input to Output

Use x to track an input and y to track its result.

GRADE 6 · 6.EE.C

CCSS.Math.Content.6.EE.C "Represent and analyze quantitative relationships between dependent and independent variables."

NAME _____ DATE _____

THE BIG IDEA

The independent variable is the input you choose, often x. The dependent variable, often y, changes because of x. Use an equation to connect the two variables.

WORKED EXAMPLE

For y = 13x + 17, find y when x = 6.

1. Substitute 6 for x.
2. y = 13(6) + 17
3. y = 78 + 17 = 95

Answer: y = 95

PRACTICE 5 problems

1 In y = 7x, name the independent variable and the dependent variable.

ANSWER _____

2 For y = 9x + 1, find y when x = 2.

ANSWER _____

3 A music app charges $3 each month and a $4 start fee. Let x be months and y be total cost. Write an equation.

ANSWER _____

4 For y = 8x, find x when y = 32.

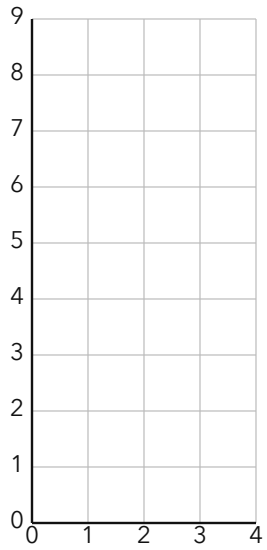
ANSWER _____

5 A video creator uploads 2 clips each week. If y = 2x and x is weeks, what does y represent?

ANSWER _____

APPLY IT Show your work

1 A game gives you 1 bonus point plus 2 points for each level completed. Let x be levels and y be points. Plot the relationship for x = 0 through 4. Then find y when x = 4.



ANSWER _____

2 A gaming lounge charges a $12 entry fee and $4 per hour. Let x be hours and y be total cost. Find y for 3 hours. Name both variables.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Two snack stands use these cost rules: Stand A, y = 3x + 7. Stand B, y = 5x + 1. For what number of snacks, x, do the costs match? What is the matching cost? Show your reasoning.

WORK SPACE AND ANSWER

ANSWER KEY

Input to Output

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	In y = 7x, name the independent variable and the dependent variable.	**Independent variable: x. Dependent variable: y.**
2	For y = 9x + 1, find y when x = 2.	**y = 19**
3	A music app charges $3 each month and a $4 start fee. Let x be months and y be total cost. Write an equation.	**y = 3x + 4**
4	For y = 8x, find x when y = 32.	**x = 4**
5	A video creator uploads 2 clips each week. If y = 2x and x is weeks, what does y represent?	**y represents the number of clips uploaded.**

PART 2 · APPLY IT

1. **Plot (0,1), (1,3), (2,5), (3,7), and (4,9). When x = 4, y = 9.** Use y = 2x + 1. Substitute each whole-number level from 0 through 4.
2. **y = 24. x is hours, and y is total cost in dollars.** Write y = 4x + 12, then substitute x = 3.

CHALLENGE

x = 3 snacks, and the matching cost is $16.

Accept equivalent equation forms, such as y = 4x + 12 or 12 + 4x. For the graph, accept correctly plotted points even if they are connected with a line.