

Grade 6 · Dependent and Independent Variables · Worksheet

Common Core 6.EE.C.9 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

These 10 problems practice identifying independent and dependent variables and relating them with equations, tables, and graphs from Common Core 6.EE.C.9. You write equations such as $d = 65t$, complete tables, plot points, and read values from a graph.

Problems 8 through 10 are word problems about a hike, a lemonade stand, and a road trip. Label every axis with the quantity it shows.

Grade 6 Common Core: 6.EE.C.9

Problem 1: Identifying Variables

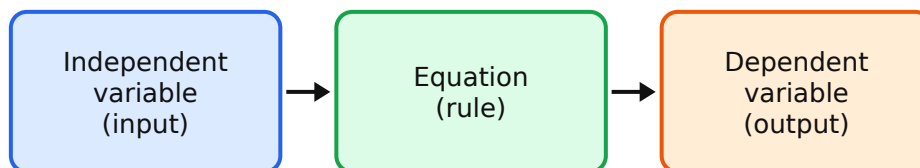
Name the independent variable and the dependent variable in each situation.

- a. The number of hours Ethan works and the money he earns
- b. The number of tickets bought and the total cost
- c. The miles Liam drives and the gas left in the tank
- d. A sunflower's age in weeks and its height

Problem 2: Variables in Equations

Name the independent variable and the dependent variable in each equation.

- a. $d = 65t$
- b. $c = 3n$
- c. $p = 12h$
- d. $y = x + 4$



Input, rule, output.

Problem 3: Writing Equations

Write an equation for each situation.

- a. The cost c of n notebooks that cost \$3 each
- b. The distance d after t hours at 55 miles per hour
- c. The pay P for h hours at \$12 per hour
- d. The perimeter P of a square with side length s

Problem 4: Completing a Table

Complete the table for the equation $c = 4n$.

n	1	2	3	4	5
c	—	—	—	—	—

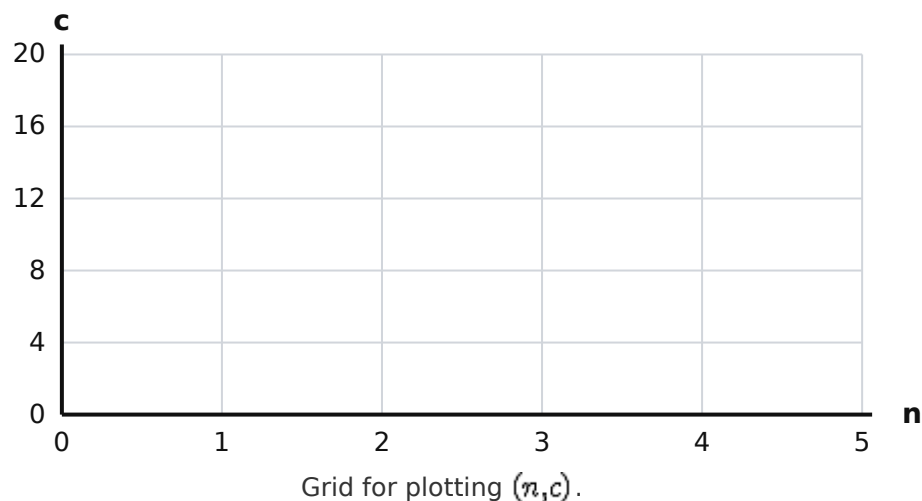
Problem 5: Table for an Addition Rule

Complete the table for the equation $y = x + 6$.

x	0	2	4	6	8
y	—	—	—	—	—

Problem 6: Plotting Points

Plot the points from the table for $c = 4n$ on the grid, with n on the horizontal axis and c on the vertical axis. Then describe the pattern the points make.



Problem 7: Equation from a Table

Write an equation for the table, with t as the independent variable and d as the dependent variable.

t (hours)	1	2	3	4
d (miles)	55	110	165	220

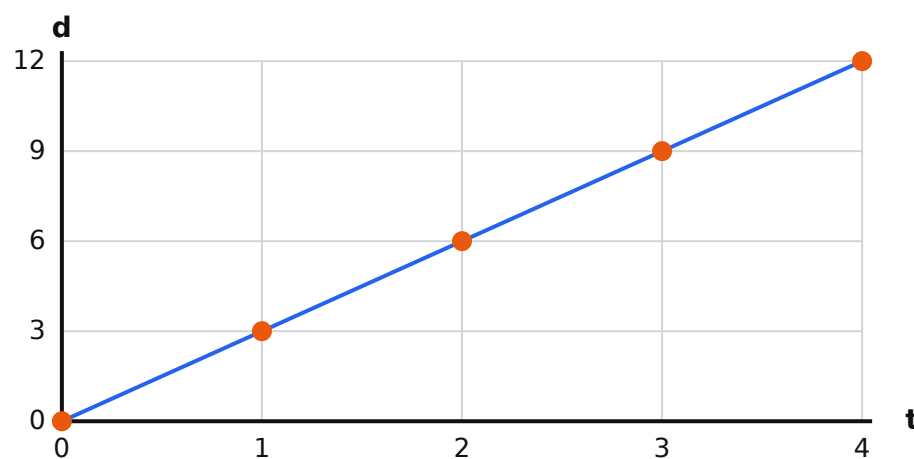
t (hours)	d (miles)
1	55
2	110
3	165
4	220

Values of t and d .

Problem 8: Reading a Graph

The graph shows the distance d , in miles, that a hiker walks in t hours.

- Name the independent and dependent variables.
- How far does the hiker walk in 3 hours?
- How many hours does it take to walk 6 miles?
- Write an equation relating d and t .



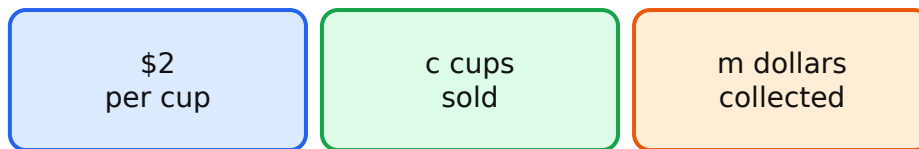
Distance d (miles) versus time t (hours).

Problem 9: Lemonade Stand

At the Little League snack stand, Sofia sells lemonade for \$2 per cup. Let c be the number of

cups sold and m the money collected in dollars.

- Write an equation and name the independent variable.
- Find the money collected when 12 cups are sold.
- Find the number of cups sold when the money collected is \$30.



Lemonade stand quantities.

Problem 10: Road Trip

Aisha's family drives at a steady 65 miles per hour. Let t be the time in hours and d the distance in miles.

- Write an equation for d in terms of t .
- Find the distance after 2.5 hours.
- Find the time to drive 325 miles.
- Plot the points for $t = 1, 2, 3, 4, 5, 6$ hours on the grid.

