

Grade 6 · Dependent and Independent Variables · Worksheet Answer Key

Common Core 6.EE.C.9 · mathovore.fr

This answer key gives complete solutions for the independent and dependent variables worksheet. Each solution shows the equation, table, or graph reading used, and every final answer is in bold so students can check their work and axis labels.

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

Problem 1: Identifying Variables

- a. Independent: **hours worked**; dependent: **money earned**
- b. Independent: **number of tickets**; dependent: **total cost**
- c. Independent: **miles driven**; dependent: **gas left**
- d. Independent: **age in weeks**; dependent: **height**

Problem 2: Variables in Equations

- a. Independent: t ; dependent: d
- b. Independent: n ; dependent: c
- c. Independent: h ; dependent: p
- d. Independent: x ; dependent: y

Problem 3: Writing Equations

- a. $c = 3n$
- b. $d = 55t$
- c. $p = 12h$
- d. A square has 4 equal sides: $P = 4s$

Problem 4: Completing a Table

Multiply each n by 4: $4 \times 1 = 4$, $4 \times 2 = 8$, $4 \times 3 = 12$, $4 \times 4 = 16$, $4 \times 5 = 20$.

n	1	2	3	4	5
c	4	8	12	16	20

n	c
1	4
2	8
3	12
4	16
5	20

Completed table.

Problem 5: Table for an Addition Rule

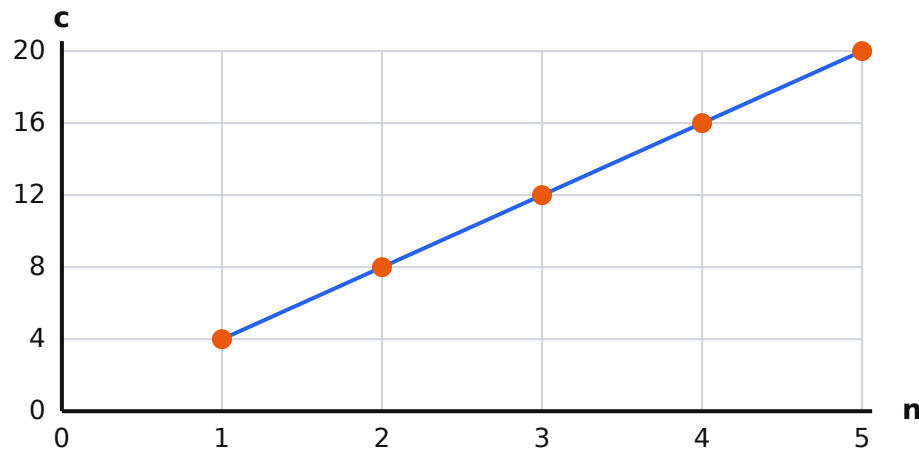
Add 6 to each x : $0+6=6$, $2+6=8$, $4+6=10$, $6+6=12$, $8+6=14$.

Answer: $y = 6, 8, 10, 12, 14$

Problem 6: Plotting Points

Plot $(1,4)$, $(2,8)$, $(3,12)$, $(4,16)$, and $(5,20)$.

The points lie on a **straight line** that rises as n increases; each step right of 1 goes up 4.



Graph of $c = 4n$.

Problem 7: Equation from a Table

Each d is 55 times t : $55 \times 1 = 55$, $55 \times 2 = 110$, $55 \times 3 = 165$, $55 \times 4 = 220$.

Equation: $d = 55t$

Problem 8: Reading a Graph

- a. Independent: **time t** ; dependent: **distance d**
- b. At $t=3$, the graph is at 9: **9 miles**
- c. At $d=6$, the graph is at $t=2$: **2 hours**
- d. Each hour adds 3 miles, so $d=3t$

Problem 9: Lemonade Stand

- a. Money equals \$2 times cups: $m=2c$. The independent variable is c .
- b. $m=2 \times 12 = \$24$
- c. $30=2c$, so $c=30 \div 2 =$ **15 cups**

Problem 10: Road Trip

- a. $d=65t$
- b. $d=65 \times 2.5 = 162.5$. Answer: **162.5 miles**
- c. $325=65t$, so $t=325 \div 65 =$ **5 hours**
- d. The points are (1,65), (2,130), (3,195), (4,260), (5,325), (6,390). **See graph.**

