

Grade 6 · Dependent and Independent Variables · Test

Common Core 6.EE.C.9 · mathovore.fr

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

This 45-minute test covers independent and dependent variables, equations, tables, and graphs (6.EE.C.9). It has 9 questions worth 20 points. Show your work for each question, and label axes on any graph you draw.

Test information

- **Grade:** Grade 6
- **Chapter:** Dependent and Independent Variables
- **Common Core:** 6.EE.C.9
- **Time:** 45 minutes
- **Total:** 20 points (Question 1: 2 pts; Question 2: 2 pts; Question 3: 2 pts; Question 4: 2 pts; Question 5: 3 pts; Question 6: 3 pts; Question 7: 2 pts; Question 8: 2 pts; Question 9: 2 pts)

Question 1: Identifying Variables (2 points)

Maya buys pounds of apples at the farmers market and pays a total cost that depends on the weight.

- Name the independent variable. (1 point)
- Name the dependent variable. (1 point)

Question 2: Variables in an Equation (2 points)

The equation $p = 15h$ gives the pay p in dollars for h hours of work.

- Which variable is independent? (1 point)
- Which variable is dependent? (1 point)

Question 3: Writing an Equation (2 points)

A car travels at a steady 55 miles per hour. Let t be the time in hours and d the distance in

miles.

- Write an equation for the distance. (1 point)
- Find the distance after 4 hours. (1 point)

Question 4: Completing a Table (2 points)

Complete the table for $y = x + 9$. (1 point for the first two values, 1 point for the last two)

x	1	4	7	10
y	—	—	—	—

Question 5: Equation from a Table (3 points)

The table shows the cost y , in dollars, of x movie snack packs.

x	1	2	3	4
y	6	12	18	24

- Write an equation for y in terms of x . (1 point)
- Name the independent variable. (1 point)
- Use your equation to find y when $x = 9$. (1 point)

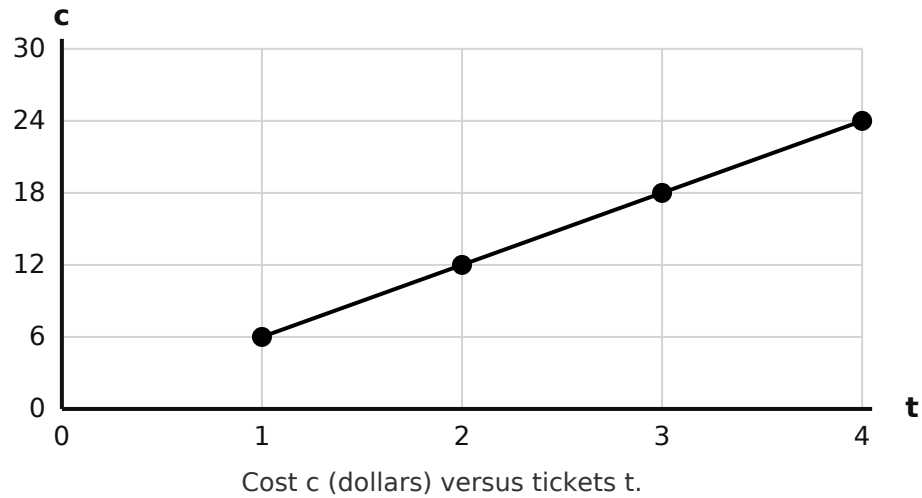
x	y
1	6
2	12
3	18
4	24

Snack pack costs.

Question 6: Reading a Graph (3 points)

The graph shows the total cost c , in dollars, of t movie tickets.

- Find the cost of 3 tickets. (1 point)
- Find the number of tickets that cost \$24. (1 point)
- Write an equation for c in terms of t . (1 point)

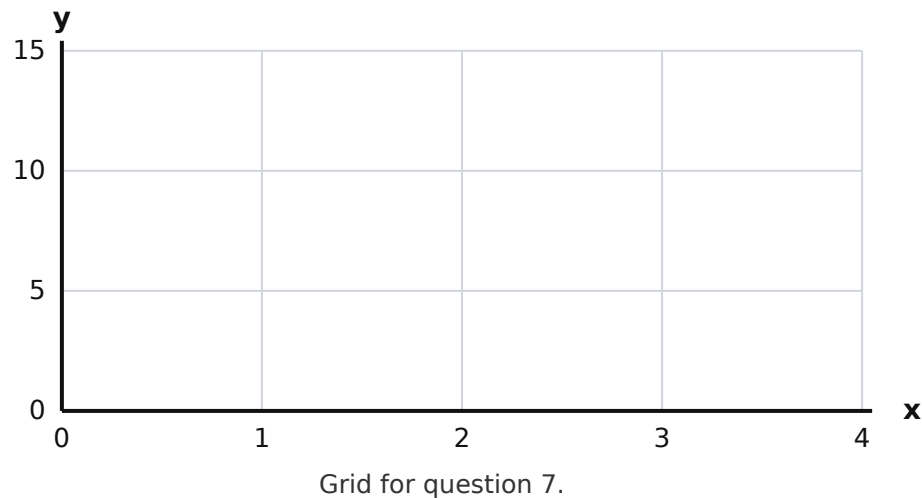


Question 7: Plotting Points (2 points)

The table shows the distance d , in miles, that Noah walks in t hours.

t	0	1	2	3
d	0	5	10	15

Plot the four points on the grid and label the axes. (2 points)



Question 8: Saving Money (2 points)

Diego saves \$5 each week and starts with \$0. Let w be the number of weeks and s the dollars saved.

- Write an equation for s in terms of w . (1 point)
- Find the number of weeks needed to save \$65. (1 point)

Question 9: Explaining Variables (2 points)

Liam says that in $d = 65t$, the variable d is the independent variable because it is the answer. Decide whether he is correct and explain.