

Grade 6 - Independent and Dependent Variables - Test

Common Core 6.EE.C.9 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

This 45-minute test has 9 questions worth 20 points. It covers independent and dependent variables, equations, tables, and graphs for relationships like $y = kx$ and $y = x + c$ (Common Core 6.EE.C.9). Show your work.

About this test

- Grade: Grade 6
- Chapter: Independent and Dependent Variables
- Standards: 6.EE.C.9
- Time: 45 minutes
- Total: 20 points

Question 1 - Variables [2 pts]

The cost y of a bus pass depends on the number of weeks x . Name the independent and dependent variables, and write the equation if the pass costs \$8 per week.

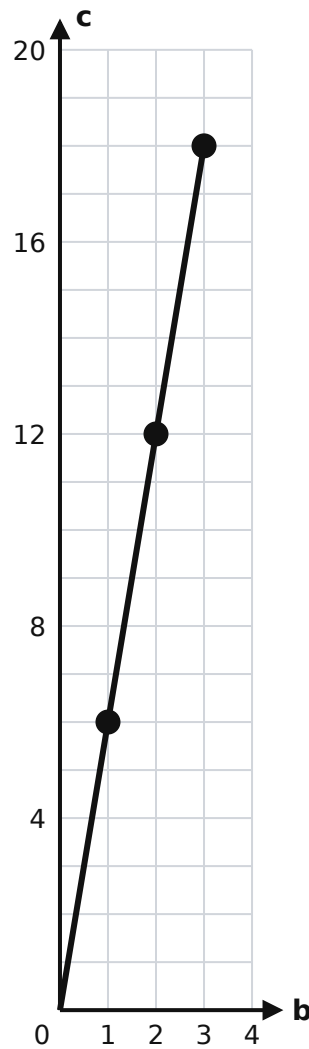
Question 2 - Complete the table [2 pts]

x	2	5	7	10
y	?	?	?	?

Fill in y.

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

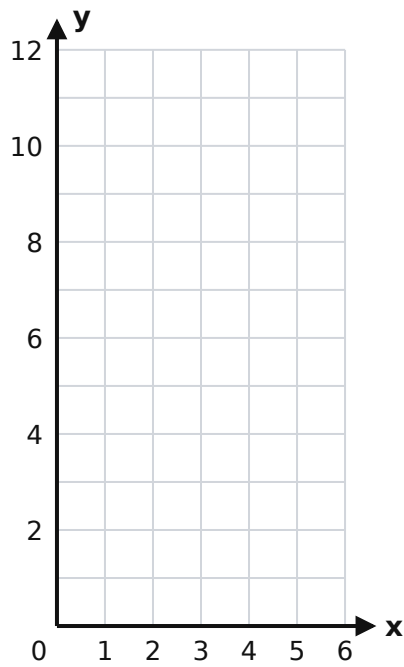
Question 3 - Equation from a graph [2 pts]



Boxes b and cookies c .

A bakery packs the same number of cookies c in every box. The graph shows c for b boxes. Write an equation and find the number of cookies in 12 boxes.

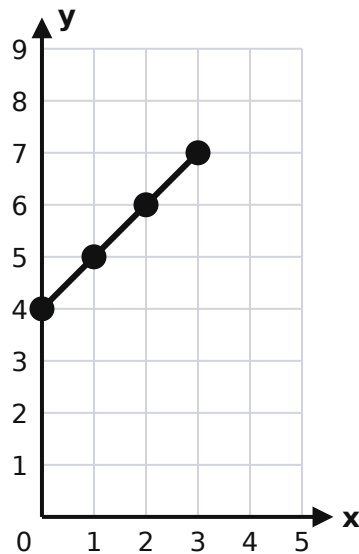
Question 4 - Graph [2 pts]



Coordinate plane.

Graph the points for $y = 2x$ when x is 1, 2, and 3.

Question 5 - Read the graph [2 pts]



A graph.

Write the equation for the graph and find y when x is 10.

Question 6 - Distance [2 pts]

A cyclist rides at 12 miles per hour. Write an equation for the distance d after t hours and find how long it takes to ride 54 miles.

Question 7 - Match the equation [2 pts]

Ethan is 5 years older than his sister. Write an equation for his age e in terms of her age s , and complete: when $s = 8$, $e = ?$; when $s = 11$, $e = ?$

Question 8 - Table and graph [3 pts]

Hours (h)	1	2	3
Pay (p)	\$6	\$12	\$18

Pay for dog walking.

- Write an equation for the pay p . (1 point)
- Find the pay for 7 hours. (1 point)
- Explain which variable is independent. (1 point)

Question 9 - Compare relationships [3 pts]

Plan A costs $y = 4x$ dollars for x months. Plan B costs $y = x + 4$ dollars for x months. Make a table for $x = 1, 2, 3, 4$ for both plans. For which of these values of x is Plan A cheaper than Plan B?