

Grade 6 - Independent and Dependent Variables - Test Answer Key

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

Use this key to score the test out of 20 points. Each solution is fully worked, and the scoring line explains how to award each point and partial credit.

Grade 6 · Common Core State Standards: **6.EE.C.9**

Question 1 - Variables [2 pts]

Independent: x (weeks). Dependent: y (cost).

$$y = 8x.$$

Scoring: 1 point for naming both variables; 1 point for the equation.

Question 2 - Complete the table [2 pts]

$y = 8, 11, 13, 16$.

x	2	5	7	10
y	8	11	13	16

Add 6 to each x .

Scoring: 1 point for two correct values; 2 points for all four.

Question 3 - Equation from a graph [2 pts]

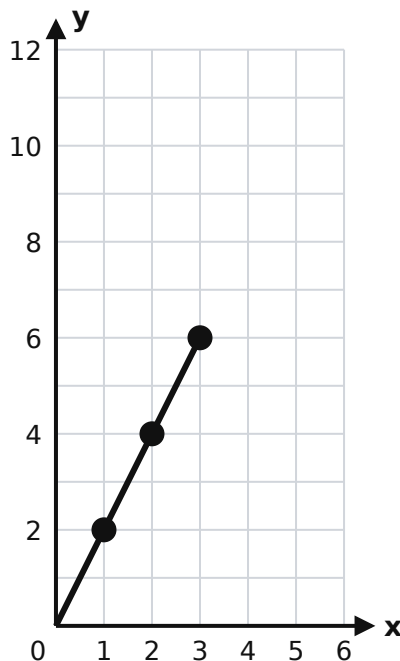
The point $(1,6)$ shows 6 cookies per box: $c = 6b$.

$$6 \cdot 12 = 72 \text{ cookies.}$$

Scoring: 1 point for the equation; 1 point for 72 cookies.

Question 4 - Graph [2 pts]

(1, 2), (2, 4), (3, 6).



Points on $y = 2x$.

Scoring: 1 point for the correct pairs; 1 point for plotting them.

Question 5 - Read the graph [2 pts]

$y = x + 4$. When $x = 10$: $10 + 4 = 14$.

Scoring: 1 point for the equation; 1 point for 14.

Question 6 - Distance [2 pts]

$d = 12t$.

$54 = 12t$, so $t = 4.5$.

Scoring: 1 point for the equation; 1 point for 4.5 hours.

Question 7 - Match the equation [2 pts]

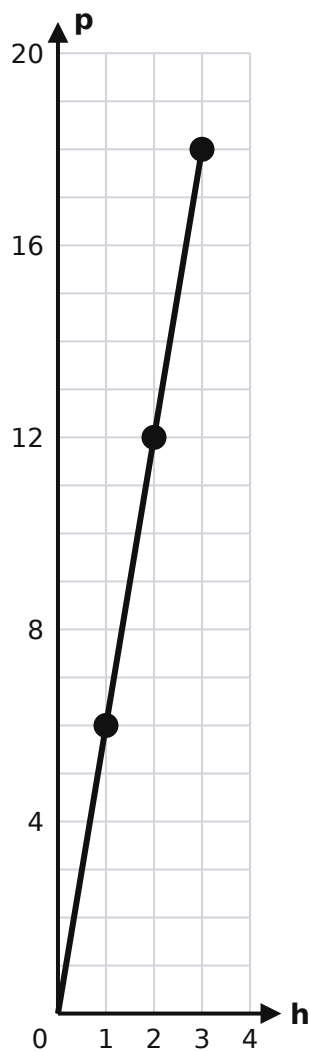
$e = s + 5$.

$8+5=13$ and $11+5=16$.

Scoring: 1 point for the equation; 1 point for both values.

Question 8 - Table and graph [3 pts]

(a) $p = 6h$. (b) $6 \cdot 7 = 42$, so \$42.00. (c) The hours h are independent; the pay p depends on h .



The graph of $p = 6h$.

Scoring: 1 point for each part.

Question 9 - Compare relationships [3 pts]

Plan A: 4, 8, 12, 16. Plan B: 5, 6, 7, 8.

At $x = 1$, A costs 4 and B costs 5, so A is cheaper. At $x = 2, 3, 4$, A costs more.

Plan A is cheaper only when $x = 1$.

Months x	1	2	3	4
Plan A: $4x$	4	8	12	16
Plan B: $x + 4$	5	6	7	8

Plan A is cheaper only at $x = 1$.

Scoring: 1 point for each table; 1 point for the correct conclusion.

Total
20 points