

Grade 6 - Independent and Dependent Variables - Quiz

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

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

This quiz has 10 multiple-choice questions on independent and dependent variables, equations, tables, and graphs (Common Core 6.EE.C.9). Pick one answer for each and read the explanation.

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

Questions

Question 1

Which is the dependent variable? "The cost of bananas depends on the pounds bought."

- A. the pounds
- B. the price per pound
- C. the cost
- D. the store

Question 2

Which equation matches the table?

x	1	2	3
y	6	12	18

Table.

- A. $y = x + 6$
- B. $y = x + 5$
- C. $y = 6x$
- D. $y = \frac{x}{6}$

Question 3

If $y = x + 9$, what is y when $x = 4$?

- A. 13
- B. 36
- C. 5
- D. 9

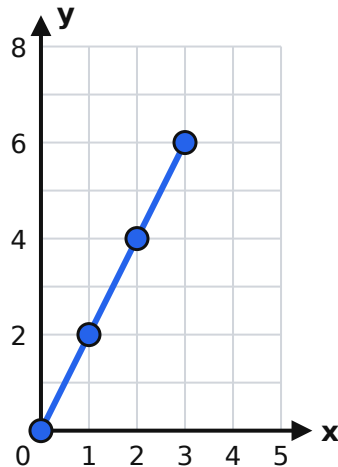
Question 4

Which point is on the graph of $y = 3x$?

- A. (4,7)
- B. (3,6)
- C. (12,4)
- D. (4,12)

Question 5

The graph of $y = 2x$ passes through which point?



Graph.

- A. (0,0)
- B. (0,2)
- C. (2,2)
- D. (1,1)

Question 6

A rental car costs \$45 per day. Which equation gives the cost c for d days?

- A. $c = d + 45$
- B. $c = 45d$
- C. $c = \frac{d}{45}$
- D. $c = 45 - d$

Question 7

Which situation matches $y = x + 6$?

- A. Ana earns \$6 each hour
- B. Ana has 6 times as many stickers
- C. Ana runs 6 miles each day
- D. Ana is 6 years older than her brother

Question 8

If $y = 5x$ and $y = 40$, what is x ?

- A. 8
- B. 35
- C. 200
- D. 45

Question 9

Which table shows $y = x + 2$?

x	1	2	3
y	3	4	5

A table.

- A. $x = 1, 2, 3$ and $y = 2, 4, 6$
- B. $x = 1, 2, 3$ and $y = 3, 4, 5$
- C. $x = 1, 2, 3$ and $y = 1, 2, 3$
- D. $x = 1, 2, 3$ and $y = 3, 6, 9$

Question 10

A line on a graph starts at $(0, 5)$ and rises 1 for every 1 across. Which equation is it?

- A. $y = 5x$
- B. $y = x + 5$
- C. $y = x - 5$
- D. $y = \frac{x}{5}$

Answers

1. **C** - The cost depends on the number of pounds, so the cost is dependent.
2. **C** - y is 6 times x each time.
3. **A** - $4+9=13$.
4. **D** - $3 \times 4 = 12$, so $(4, 12)$. $(4, 7)$ is on $y = x + 3$.
5. **A** - When $x = 0$, $y = 0$, so the line passes through the origin.
6. **B** - Cost = price per day times days.
7. **D** - The other choices multiply by 6.
8. **A** - $40 \div 5 = 8$.
9. **B** - Add 2 to each x : 3, 4, 5.
10. **B** - Starting at 5 and adding 1 each step gives $y = x + 5$.

Remember

- The independent variable is the input; the dependent variable is the output.
- In $y = kx$, y is k times x and the graph passes through the origin.
- In $y = x + c$, y is c more than x and the graph crosses the y -axis at c .
- A table, a graph, and an equation can show the same relationship.
- Use substitution to find y from x , and solve an equation to find x from y .