

Grade 6 · Dependent and Independent Variables · Test Answer Key

Common Core 6.EE.C.9 · mathovore.fr

This answer key for the dependent and independent variables test gives a worked solution and a scoring guide for each of the 9 questions. Award partial credit as described, and total the score out of 20 points.

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

Question 1: Identifying Variables (2 points)

- a. **Pounds of apples**
- b. **Total cost**

Scoring: 1 point for each correct variable.

Question 2: Variables in an Equation (2 points)

- a. h (hours worked)
- b. P (pay)

Scoring: 1 point for each correct variable.

Question 3: Writing an Equation (2 points)

- a. Distance equals rate times time: $d = 55t$
- b. $d = 55 \times 4 = \mathbf{220 \text{ miles}}$

Scoring: 1 point for the equation; 1 point for the correct distance.

Question 4: Completing a Table (2 points)

Add 9 to each x : $1+9=10$, $4+9=13$, $7+9=16$, $10+9=19$.

x	1	4	7	10
y	10	13	16	19

Scoring: 1 point for the first two values; 1 point for the last two.

Question 5: Equation from a Table (3 points)

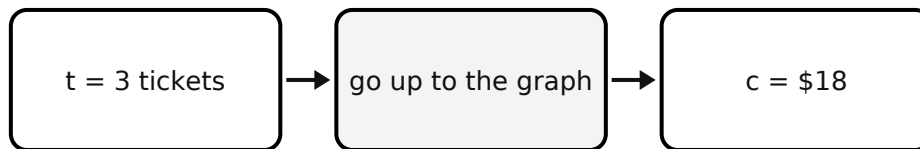
- a. Each y is 6 times x : $y = 6x$
- b. x (number of snack packs)
- c. $y = 6 \times 9 = 54$

Scoring: 1 point for each part.

Question 6: Reading a Graph (3 points)

- a. At $t = 3$, the graph is at 18: **\$18**
- b. At $c = 24$, the graph is at $t = 4$: **4 tickets**
- c. Each ticket costs \$6: $c = 6t$

Scoring: 1 point for each part.

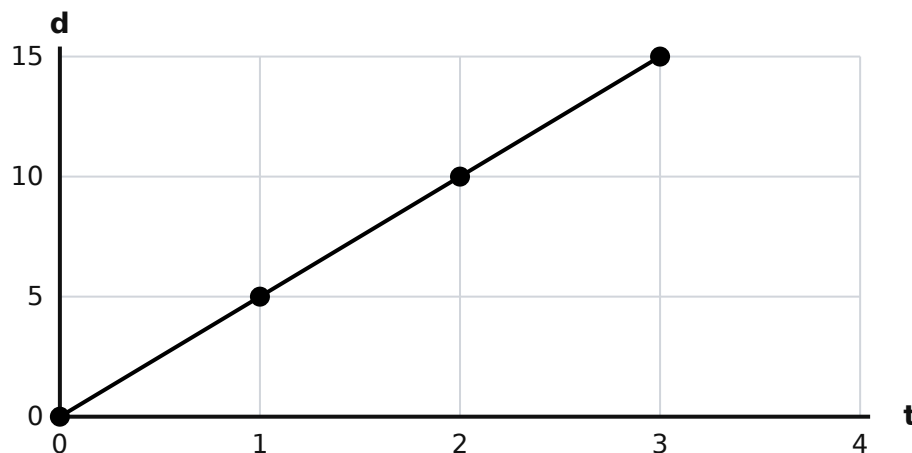


Reading the graph for part (a).

Question 7: Plotting Points (2 points)

Plot $(0,0)$, $(1,5)$, $(2,10)$, and $(3,15)$, with t on the horizontal axis and d on the vertical axis. The points lie on a straight line.

Scoring: 1 point for all four points plotted correctly; 1 point for correct axes labels (t horizontal, d vertical).



Correct graph for $d = 5t$.

Question 8: Saving Money (2 points)

a. $s = 5w$

b. $65 = 5w$, so $w = 65 \div 5 = \mathbf{13 \text{ weeks}}$

Scoring: 1 point for the equation; 1 point for the correct number of weeks.

Question 9: Explaining Variables (2 points)

Liam is **not correct**. The distance d depends on the time t , because time is the quantity that changes freely and distance is determined by it. So t is independent and d is dependent. Being alone on one side of the equation does not make a variable independent.

Scoring: 1 point for saying he is incorrect; 1 point for a correct explanation that d depends on t .

Total
20 points