

Grade 8 - Systems of Linear Equations - Quiz

Common Core 8.EE.C.8a, 8.EE.C.8b, 8.EE.C.8c · maths-pdf.fr/en/

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

Pick the best answer for each of the 10 questions about systems of two linear equations solved by graphing, substitution and elimination (Common Core 8.EE.C.8a, 8.EE.C.8b and 8.EE.C.8c). Read each question carefully, then read the explanation to learn from any mistake.

Grade 8 · Common Core State Standards: **8.EE.C.8a**, **8.EE.C.8b**, **8.EE.C.8c**

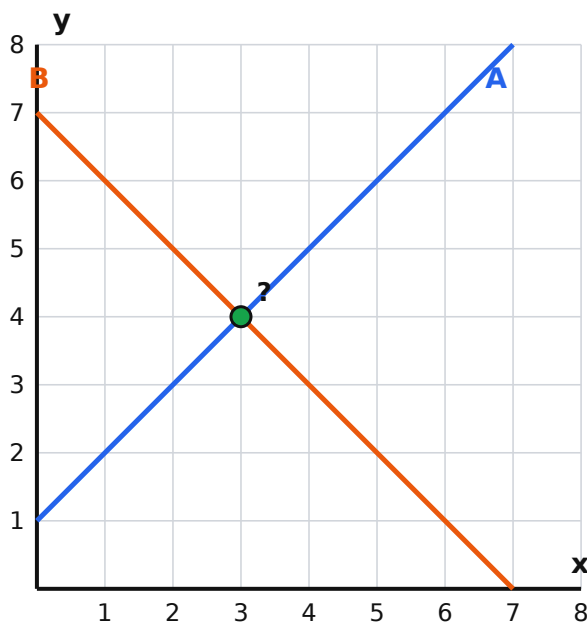
Questions

Question 1

Which ordered pair solves $x + y = 8$ and $x - y = 2$?

- A. (5,3)
- B. (3,5)
- C. (6,2)
- D. (4,4)

Question 2

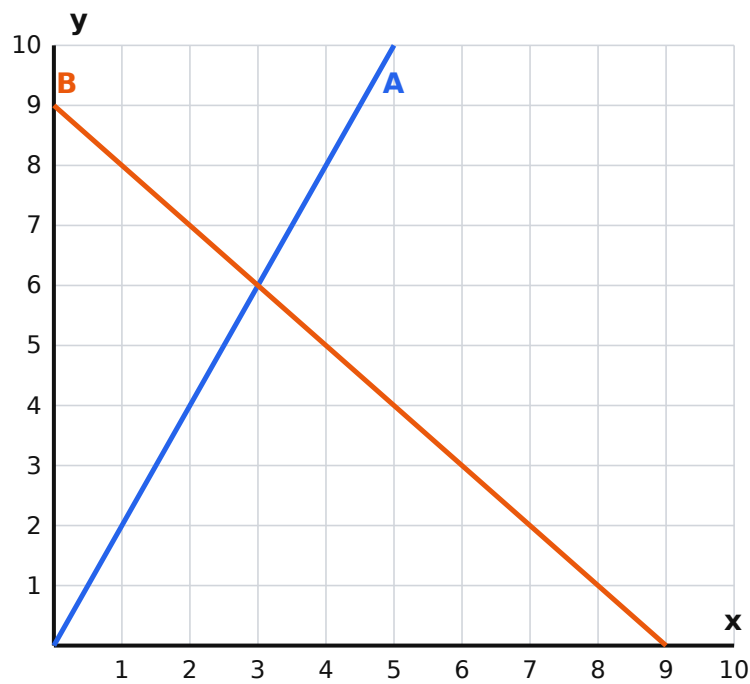


A: $y = x + 1$ and B: $y = -x + 7$.

What is the solution of the system shown?

- A. (4,3)
- B. (1,7)
- C. (3,4)
- D. (0,1)

Question 3



A: $y = 2x$ and B: $x + y = 9$.

Solve $y = 2x$ and $x + y = 9$.

- A. (3,6)
- B. (6,3)
- C. (9,18)
- D. (3,9)

Question 4

Solve $x + y = 14$ and $x - y = 6$.

- A. (4,10)
- B. (8,6)
- C. (20,8)
- D. (10,4)

Question 5

How many solutions does $y = 3x + 2$ and $y = 3x - 5$ have?

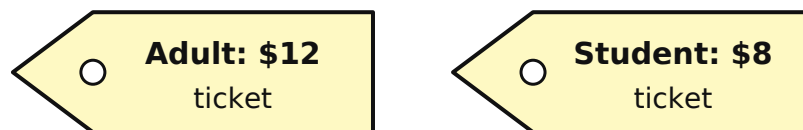
- A. One
- B. None
- C. Two
- D. Infinitely many

Question 6

How many solutions does $x + y = 5$ and $2x + 2y = 10$ have?

- A. None
- B. Infinitely many
- C. One
- D. Exactly two

Question 7



Prices for the school play.

Adult tickets cost \$12 and student tickets cost \$8. If 5 adult and 3 student tickets are bought, what is the total cost?

- A. \$84
- B. \$60
- C. \$96
- D. \$20

Question 8

Two numbers add to 20 and differ by 4. What are they?

- A. 10 and 10
- B. 14 and 6
- C. 12 and 8
- D. 16 and 4

Question 9

Which first step eliminates y in $3x + y = 10$ and $x - y = 2$?

- A. Subtract the equations
- B. Add the equations

- C. Multiply the first by 3
- D. Divide the second by 2

Question 10

A system has the solution $(2,5)$. What does that tell you?

- A. Only the first equation is true at that point
- B. The lines are parallel
- C. The lines never cross
- D. Both equations are true when $x = 2$ and $y = 5$

Answers

1. **A** - $5 + 3 = 8$ and $5 - 3 = 2$. The pair (3, 5) fails the second equation.
2. **C** - The point where the lines cross is (3, 4); x comes first.
3. **A** - $x + 2x = 9$ gives $x = 3$, so $y = 6$.
4. **D** - Add: $2x = 20$, so $x = 10$. Then $y = 4$.
5. **B** - The lines have the same slope and different intercepts, so they are parallel.
6. **B** - The second equation is twice the first, so the lines coincide.
7. **A** - $5 \times 12 + 3 \times 8 = 60 + 24 = 84$.
8. **C** - $x + y = 20$ and $x - y = 4$ give $x = 12$ and $y = 8$.
9. **B** - The y-terms are +y and -y, so adding cancels them: $4x = 12$.
10. **D** - A solution satisfies every equation in the system, so the lines intersect there.

Remember

- The solution of a system is the intersection point of the lines.
- Different slopes: one solution. Same slope, different intercepts: no solution. Same line: infinitely many.
- Substitution: solve one equation for a variable and substitute it into the other.
- Elimination: add or subtract the equations to cancel a variable.
- Always check the ordered pair in both equations.