

Algebra 1 - Systems of Linear Equations - Test

Common Core A-REI.C.5, A-REI.C.6, A-REI.D.11, A-CED.A.3 · maths-pdf.fr/en/

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

This 45-minute test on systems of linear equations covers Common Core A-REI.C.5, A-REI.C.6, and A-REI.D.11 and is worth 20 points. Work alone, show all steps, and use a calculator only if your teacher allows it. Partial credit is given for correct work, so write down your reasoning even when you are unsure of the final answer.

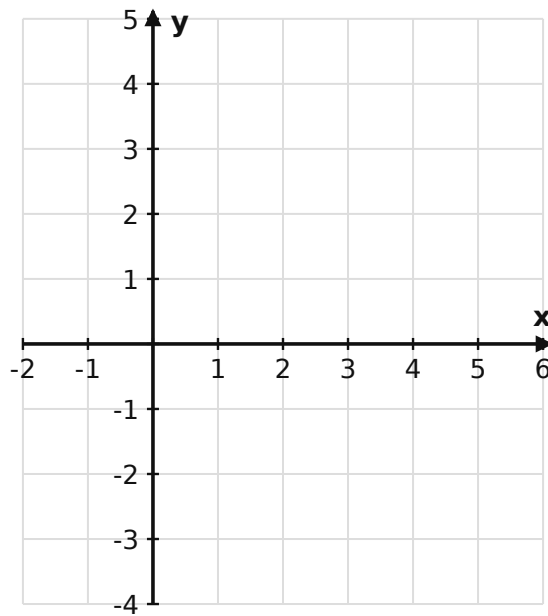
About this test

- Grade: Algebra 1
- Chapter: Systems of Linear Equations
- Standards: A-REI.C.5, A-REI.C.6, A-REI.D.11, A-CED.A.3
- Time: 45 minutes
- Total: 20 points

Question 1 - Check a solution [2 pts]

Is $(3, -1)$ a solution of the system $x + 2y = 1$ and $3x - y = 10$? Show your work.

Question 2 - Solve by graphing [2 pts]



Grid for question 2.

Solve by graphing: $y = 2x - 2$ and $y = -x + 4$.

Question 3 - Substitution [2 pts]

Solve by substitution: $y = 2x - 3$ and $3x + y = 12$.

Question 4 - Elimination [2 pts]

Solve by elimination: $4x + 3y = 17$ and $2x - 3y = -5$.

Question 5 - Elimination with multiplying [2 pts]

Solve: $3x + 2y = 7$ and $2x - 5y = -8$.

Question 6 - Number of solutions [2 pts]

Describe the number of solutions of each system.

- $y = -2x + 3$ and $4x + 2y = 6$ (1 point)
- $y = x + 1$ and $y = x + 4$ (1 point)

Question 7 - Ticket sales [3 pts]

Ticket	Price
Student	\$5
Adult	\$8

Ticket prices.

A school play sold 150 tickets. Student tickets cost \$5 and adult tickets cost \$8. The total sales were \$930. Let s be the student tickets and a the adult tickets.

- Write a system of equations. (1 point)
- Solve the system. (1 point)
- Check your answer. (1 point)

Question 8 - Break-even point [3 pts]



Cost and revenue of a lawn business (x in lawns).

A lawn business has costs $y = 200 + 5x$ and revenue $y = 15x$ dollars for x lawns. The graph shows both lines.

- Write an equation to find when cost equals revenue. (1 point)
- Solve it. (1 point)
- Explain the meaning of the intersection point. (1 point)

Question 9 - Find the error [2 pts]
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A student says $(4,6)$ is the solution of $x + y = 10$ and $x - y = 2$. Show that this is wrong and find the correct solution.