

Algebra 1 - Solving Linear Equations in One Variable - Test

Common Core A-REI.A.1, A-REI.B.3, A-CED.A.1 · maths-pdf.fr/en/

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

Take this 20-point, 45-minute test to measure your skill with linear equations in one variable (A-REI.B.3 and A-CED.A.1). Read each question carefully, show your work, and check units and signs before you move on. If you get stuck, skip the question and return to it at the end.

About this test

- Grade: Algebra 1
- Chapter: Solving Linear Equations in One Variable
- Standards: A-REI.A.1, A-REI.B.3, A-CED.A.1
- Time: 45 minutes
- Total: 20 points

Question 1 - One-step and two-step [2 pts]

- a. Solve $x - 9 = 14$. (1 point)
- b. Solve $5x + 8 = -17$. (1 point)

Question 2 - Both sides [2 pts]

Solve $7x - 4 = 3x + 20$.

Question 3 - Distribute [2 pts]

Solve $4(2x - 3) = 3x + 13$.

Question 4 - Fraction coefficient [2 pts]

Solve $\frac{3}{4}x + 2 = 11$.

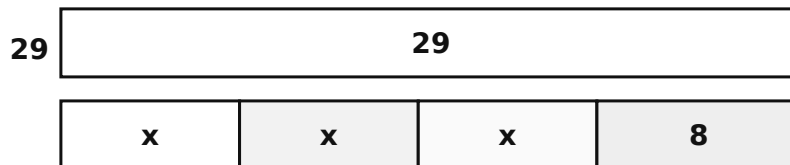
Question 5 - Types of solutions [2 pts]

Describe the solutions of each equation as one solution, no solution, or infinitely many solutions.

a. $5(x-1)=5x-5$ (1 point)

b. $2x+3=2x-4$ (1 point)

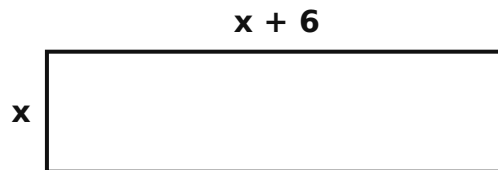
Question 6 - Tape diagram [2 pts]



Question 6 diagram.

The tape diagram shows three equal parts x and one part 8 with a total of 29. Write an equation and solve it.

Question 7 - Rectangle perimeter [3 pts]



Perimeter 44 inches.

The rectangle has width x inches and length $x+6$ inches. Its perimeter is 44 inches.

a. Write an equation for the perimeter. (1 point)

b. Solve the equation. (1 point)

c. State the length and width. (1 point)

Question 8 - Equal savings [3 pts]

Weeks	Jamal	Sofia
0	\$120	\$45
5	\$195	\$145
10	\$270	\$245

Savings after 0, 5, and 10 weeks.

Jamal has \$120 and saves \$15 each week. Sofia has \$45 and saves \$20 each week.

- Write an equation to find the number of weeks w when they have the same amount. (1 point)
- Solve the equation. (1 point)
- Find how much each has then. (1 point)

Question 9 - Find the error [2 pts]

A student solved $3(x+4)=21$ by writing $3x+4=21$ and got $x=\frac{17}{3}$. Identify the error and find the correct solution.