

Grade 8 - Solving Linear Equations in One Variable - Test

Common Core 8.EE.C.7a, 8.EE.C.7b · maths-pdf.fr/en/

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

This 20-point test checks solving linear equations with variables on both sides and equations with no or infinitely many solutions (Common Core 8.EE.C.7a and 8.EE.C.7b). Work alone, show every step, and write each final answer clearly. You have 45 minutes. Calculators are not needed unless a question says so.

About this test

- Grade: Grade 8
- Chapter: Solving Linear Equations in One Variable
- Standards: 8.EE.C.7a, 8.EE.C.7b
- Time: 45 minutes
- Total: 20 points

Question 1 - Solve [3 pts]

- a. Solve $4x - 9 = 15$. (1 point)
- b. Solve $6x + 4 = 2x + 20$. (2 points)

Question 2 - Distribute [3 pts]

Solve $5(x - 2) = 3x + 8$.

Question 3 - Fractions [2 pts]

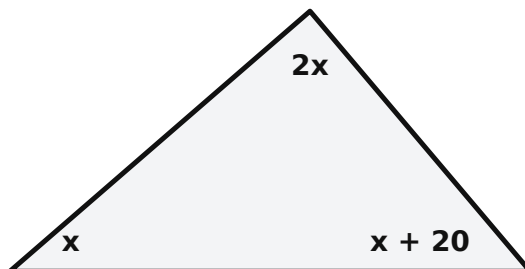
Solve $\frac{x}{3} + 2 = \frac{x}{6} + 5$.

Question 4 - Number of solutions [3 pts]

- a. How many solutions does $3(x + 2) = 3x + 6$ have? (1 point)

- b. How many solutions does $2x+7=2x-1$ have? (1 point)
c. Explain how you know for part b. (1 point)

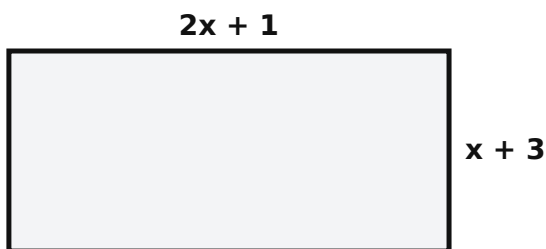
Question 5 - Triangle [3 pts]



Angles of a triangle add to 180 degrees.

Find the value of x and the three angle measures.

Question 6 - Rectangle [2 pts]



Perimeter 38 inches.

The perimeter is 38 inches. Find x .

Question 7 - Compare plans [3 pts]



Two plans.

Plan A costs \\$15 plus \\$10 per week. Plan B costs \\$15 per week. After how many weeks do the plans cost the same?

Question 8 - Explain [1 pt]

Why does an equation that simplifies to $4 = 4$ have infinitely many solutions?