



Solving linear equations

GRADE 8 MATH

Name _____

Date _____

Solve each one. Say whether it has one solution, no solution, or infinitely many. Check by substituting.

WORKED EXAMPLE

One solution, none (constants disagree after the x cancels), or all (both sides identical).
Distribute to every term.

1. Solve $4x - 7 = 17$.

FLUENCY

Show your thinking

Answer

2. Expand $6(x + 5)$ and $6(x - 5)$.

FLUENCY

Show your thinking

Answer

3. Solve $3(x + 4) = 27$.

APPLICATION

Show your thinking

Answer

4. Solve $5x + 2 = 5x + 11$.

REASONING

Show your thinking

Answer

5. Solve $2(x + 3) = 2x + 6$.

REASONING

Show your thinking

Answer

6. Solve $7x - 4 = 3x + 12$.

APPLICATION

Show your thinking

Answer

7. Explain how you can tell, before finishing, that an equation will have no solution.

REASONING

Show your thinking

Answer

8. Solve $\frac{1}{2}x + 3 = 8$.

APPLICATION

Show your thinking

Answer

9. Make up an equation with infinitely many solutions, and explain why yours works.

REASONING

Show your thinking

Answer