

Name: _____

8M – U2 Study Guide – Algebraic Equations

One-Step Equations: Solve for x

1. $-7x = -84$

2. $x - 62 = -25$

3. $x + 75 = -97$

4. $\frac{1}{5}x = 67$

5. How do you solve for x in one-step equations? Use 1-2 complete sentences.

Two-Step Equations: Solve for x

6. $47 - 8x = -225$

7. $\frac{x}{6} - 24 = -17$

8. How do you solve for x in two-step equations? Use 1-2 complete sentences.

Combine Like Terms: Solve for x

9. $12x - 27x = 135$

10. $4x - 33 + 7x = 88$

11. $14 + 5x - 38 = -1$

12. $\frac{2}{3}x - \frac{6}{8}x = 14$

13. How do you combine like terms on the same side of the equal sign? Use 1-2 complete sentences.

Variables on Both Sides: Solve for x

14. $150 - x - 2x = 120 + 2x$

15. $-8x - 46 = 4x + 50$

16. How do you combine like terms across the equal sign? Use 1-2 complete sentences.

Multi-Step Equations: Solve for x and identify solution as one, identity, or null

17. $8x - 3(x + 7) = 34$

18. $3x + 4(2x - 7) = 5(3x - 8) - 2(2x + 1)$

19. $-6x - 3(1 + 5x) = -8(x - 4) + 4$

20. $-2(x + 12) + 4(2x - 7) = 2$