Name: Key

Unit 1 Day 8 Notes

Solving Equations and Combining like Terms

Part 1: Combining like terms on the same side of the equation.

(1-6) Solve the equation completely:

1. $3x + 2x = 10$

$\frac{5x}{5} = \frac{10}{5}$

$x = 2$

2. $6c - 5 + c = 9$

$7c - 5 = 9$

$7c = 14$

$c = 2$

3. $20 - 5m - 4m = 11$

$20 - 9m = 11$

$-9m = -9$

$m = 1$

4. $26 = -2y + 10 + 4y$

$16 = 2y$

$y = 8$

5. $2x + 2(3x + 4) = -24$

$2x + 6x + 8 = -24$

$8x + 8 = -24$

$8x = -32$

$x = -4$

6. $12 = 5(w - 6) + w$

$12 = 5w - 30 + w$

$42 = 6w$

$w = 7$

Part 2: Solving Equations when variables are on BOTH sides of the equation.

(7-14) Solve the equation completely:

7. $12m = 6m + 18$

$-6m \quad -6m$

$6m = 18$

$m = 3$

8. $32 - 20h = -28h$

$32 = -8h$

$h = -4$

9. $7x + 10 = 2x + 25$

$-10 \quad -10$

$7x = 2x + 15$

$-2x \quad -2x$

$5x = 15$

$x = 3$

10. $8a - 9 = 2 - 3a$

$+9 \quad +9$

$8a = 11 - 3a$

$+3a \quad +3a$

$11a = 11$

$a = 1$

11. $-3 - 10k = 10k + 7$

$+3 \quad +3$

$-10k = 10k + 10$

$-10k \quad -10k$

$\frac{-20k}{-20} = \frac{10}{-20}$ → $k = -1/2$

12. $2x + 10 = -2(x + 5)$

$2x + 10 = -2x - 10$

$-10 \quad -10$

$2x = -2x - 20$

$4x = -20$

$x = -5$

13. $3(4z - 8) = -21 + 13z$

$12z - 24 = -21 + 13z$

$+21 \quad +21$

$12z - 3 = 13z$

$-12z \quad -12z$

$-3 = z$

$z = -3$

14. $-6p = 4(1 - p)$

$-6p = 4 - 4p$

$+4p \quad +4p$

$\frac{-2p}{-2} = \frac{4}{-2}$

$p = -2$