Algebra 1 2.4

Solve equations with the variable on each side.
Solve equations with grouping symbols.

identity
no solution
all real numbers

Quiz 2.3-2.4 Wed.
MCT Thurs.

Whiteboards

ConceptSummary Steps for Solving Equations

Step 1 Simplify the expressions on each side. Use the Distributive Property as needed.

Step 2 Use the Addition and/or Subtraction Properties of Equality to get the variables on one side and the numbers without variables on the other side. Simplify.

Step 3 Use the Multiplication or Division Property of Equality to solve.

$2(3x+3)-6 = 5(3x-2)+3x-7$

$2x+6-6 = 5x-10+3x-7$

$2x+0 = 8x+-17$

$2x = 8x+-17$

$-2x \quad -2x$

$0 = 6x+-17$

$+17 \qquad +17$

$\frac{17}{1} = \frac{6x}{6}$

$x = \frac{17}{6}$

$3(-3)+2(4)=4(-2)+7$

$-9+8=-8+7$

$-1=-1$

$3(x-6)+2(x+1)=4(x-5)+7$

$3x-18+2x+2=4x-20+7$

$5x-16=4x-13$

$-4x \qquad -4x$

$x-16=-13$

$+16 \qquad +16$

$x=3$

Solve + check

14. $\frac{b-4}{6} = \frac{b}{2}$

15. $\frac{5v-4}{10} = \frac{4}{5}$

16. $8 = 4(r+4)$

17. $6(n+5) = 66$

$$\frac{b-4}{6} = \frac{b}{2}$$

18. $5(g + 8) - 7 = 103$

19. $12 - \frac{4}{5}(x + 15) = 4$

20. $3(3m - 2) = 2(3m + 3)$

21. $6(3a + 1) - 30 = 3(2a - 4)$

$12 - \frac{4}{5}x - 12 = 4$

$\frac{-4}{5}x = \frac{4}{-4}$

$\frac{-4}{5} \quad \frac{-4}{5}$ $x = -5$

$18a + 6 - 30 = 6a - 12$

$18a + -24 = 6a - 12$

$-6a \qquad -6a$

$12a + -24 = -12$

$+24 \quad +24$

$12a = 12$

$\frac{12}{12} \quad \frac{12}{12}$ $a = 1$