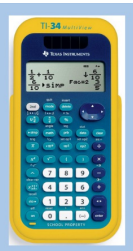
MS Algebra: 3.2.10



Warm-up

Any ?s on HW: Worksheet 3.2.9

Goal: I can solve multi-step equations in one variable.

HW: Worksheet 3.2.10

Solving
ations with
tributing
and
mbining
e terms.

Step 1: Change any subtraction to add the opposite.

Step 2: Distribute to eliminate the parentheses.

Step 3: Combine like terms.

Step 4: Solve for the variable.

Example 1: $2(x + 7) + x = 20$

$2x + 14 + 1x = 20$

$3x + 14 = 20$

$-14 \quad -14$

$\frac{3x}{3} = \frac{6}{3}$

$x = 2$

Example 2: $12 = 4 + -2(1 + x)$

$12 = 4 + -2 + -2x$

$12 = 2 + -2x$

$-2 \quad -2$

$\frac{10}{-2} = \frac{-2x}{-2}$

$-5 = x$

Example 3: $13x + -3(x + -20) = 10$

$13x + -3x + 60 = 10$

$10x + 60 = 10$

$-60 \quad -60$

$\frac{10x}{10} = \frac{-50}{10}$

$\boxed{x = -5}$

Example 4: All combo meals at a local restaurant are the same price. You have a coupon for $2 off each meal. You order 6 meals for the members of your family. You also bought one $14 cake. If you spent a total of $68, what is the original price of each combo meal? → p

$6(p + -2) + 14 = 68$

$6p + -12 + 14 = 68$

$6p + 2 = 68$

$-2 \quad -2$

$\frac{6p}{6} = \frac{66}{6}$

$p = 11$