Name_____   Date _____

Mr. Tallman

<u>Do Now</u>

<u>Solve the following. DON'T CHECK.</u>

1) $6(x + 3) = 48$

2) $-7(-x - 2) = 70$

<u>Lesson #57 – Solving Multi-Step Equations and Rational Number Equations</u>

We can put together everything we've learned about expressions and equations to solve multi-step equations.

Example 1) Solve and Check: $5x + 3(x + 4) = 28$

Example 2) Solve and Check: $3(4x - 5) - 2(-11 + 2x) = 43$

Now, You Try!

Solve and Check the following equations.

3) $3(x - 2) = 12$	4) $2(x + 7) + x = 20$
5) $x + 4(2x + 3) = 15$	6) $2(2x + 3) - 2 = 5$
7) $4(x + 2) - 2x = 0$	8) $2(3x - 1) - 2(-4x - 5) = 8$

Equations with **rational numbers** as constants and coefficients can also be solved.

Example 9)   Solve the following equation: $\frac{7}{8}x + 2 = 16$

Example 10) Solve the following equation: $\frac{1}{2}x + \frac{1}{3}x - 20 = -10$

Now, You Try!

Solve each equation. Round your answer to the nearest hundredth if necessary.

11) $x - \frac{2}{5} = \frac{8}{5}$	12) $0.75(2x + 1) = 2$
13) $\frac{2}{5}x - \frac{4}{5} = -3$	14) $9.4x + 0.8 = 18.24$
15) $\frac{3}{2}x - 2 = 7$	16) $3.5x + 2.7 - 1.4x = 17.4$