Find the exact solution to each equation.

1. $5 - \frac{9}{7}w = -3$

$-5 \quad -5$

$\frac{7}{-9} \cdot \frac{-9}{7}w = -8 \cdot \frac{7}{-9}$

$w = \frac{-56}{-9} = \frac{56}{9} = 6.\overline{2}$

2. $\frac{11-m}{6} = 8$ $11 - m = 48$

$m = -37$

3. You went to the store and bought some apples at $0.79 each. You bought 2 more pears than apples and they cost $1.15 each. You also bought a gallon of milk for $2.99. Your bill at the cash register was for a total of $13.05. Write and solve an equation to find the number of apples and pears purchased.

# of Apples = $x = 4$

# of Pears = $x + 2 = 6$

$x = 4$

$0.79x + (x+2)1.15 + 2.99 = 13.05$

$1.94x + 5.29 = 13.05$

$1.94x = 7.76$

4. Two angles are supplementary. One of the angles is six less than twice the other angle. Write and solve an equation to find the measure of both angles. (Two angles are supplementary if they have a sum of 180°)

$x + 2x - 6 = 180$ (62, 118°)

$3x - 6 = 180$

$3x = 186$

$x = 62°$

angle 1 = x

angle 2 = $2x - 6$

1.) $\frac{5}{21} + \frac{6}{7}x = 12$

2.) $\frac{7}{12} - \frac{3}{8}x = \frac{5}{6}$

What is a good name for this kind of equation? Multi-Step Equation

$7m + 8 - 2m + 13 = 75$

$5m + 21 = 75$

$5m = 54$

$m = \frac{54}{5}, 10.8$

Sec 2-3: Solving Multi-Step Equations

Sec 2-3: Solving Multi-Step Equations

- Eliminate parentheses from the problem
  - Distributive Property
  - Division
- Combine like terms that are on the same side of the = sign
- Solve for the variable

Solve.

$6 - 2(Q + 8) - 9 + 5Q = 31$

$6 - 2Q - 16 - 9 + 5Q = 31$

$3Q - 19 = 31$

$3Q = 50$

$Q = 16.\overline{6}$

$2x + 11 - 6(x - 8) - 3x + 21 = 46$

$2x + 11 - 6x + 48 - 3x + 21 = 46$

$-7x + 80 = 46$

$-7x = -34$

$x = 4.857$

$4.86 \uparrow$

$\frac{5m - 7}{3} - 8 = 4$

$+8 \quad +8$

$\frac{5m - 7}{3} = 12$

$5m - 7 = 36$

$5m = 43$

$m = 8.6$

Hwk #11 - due Monday

Sec. 2-3

pages 91-93

Problems 8, 10, 14, 16, 40, 51, 54, 57

IXL #4 - J.3 & J.4 due tomorrow at 4pm!