

## Pre-Algebra

## HW #17: Equations and Inequalities Test Study Guide

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 Per: 2

Solve each of the following equations for  $x$ . For full credit, show each step like we have done together in class.

1)  $89 = -25 + x$

$$\begin{array}{r} 89 = -25 + x \\ +25 \quad +25 \\ \hline 114 = x \\ x = 114 \end{array}$$

2)  $\frac{x}{-12} = 15$

$$\begin{array}{r} -12 \cdot \frac{x}{-12} = 15 \cdot -12 \\ x = -180 \end{array}$$

3)  $20 + \frac{x}{8} = -10$

$$\begin{array}{r} \frac{x}{8} + 20 = -10 \\ -20 \quad -20 \\ \hline \frac{x}{8} = -30 \\ 8 \cdot \frac{x}{8} = -30 \cdot 8 \\ \hline x = -240 \end{array}$$

4)  $18 - 16x = 66$

$$\begin{array}{r} -16x + 18 = 66 \\ -18 \quad -18 \\ \hline -16x = 48 \\ \div -16 \quad \div -16 \\ \hline x = -3 \end{array}$$

5)  $13x = 7$   
 (express answer as a fraction, not a decimal)

$$x = \frac{7}{13}$$

6)  $10x + 300 = -500$

$$\begin{array}{r} 10x + 300 = -500 \\ -300 \quad -300 \\ \hline 10x = -800 \\ \div 10 \quad \div 10 \\ \hline x = -80 \end{array}$$