

March.9th, 2016

# Unit 4 Day 1

## 4-1 Solving Equations + Translating Expressions

<u>Phrase</u>	<u>Expression or Equation</u>
1) Sum of a # and 12	$x + 12$ (expression)
2) 8 less than a #	$n - 8$
3) Two-fifths of a #	$\frac{2}{5}x = \frac{2x}{5}$ ( <del><math>= \frac{2}{5}x</math></del> )
4) 5 more than twice a #	$2n + 5$
5) Twice the sum of a # and 7	$2(n + 7)$
6) The product of a # and one more than the #	$x(x + 1)$
7) 3 less than twice a # <span style="border: 1px solid black; padding: 2px;">is</span> 8 more than the #.	$2n - 3 = n + 8$
8) 6 more than an integer <span style="border: 1px solid black; padding: 2px;">is</span> 3 less than twice the next consecutive integer.	$x + 6 = 2(x + 1) - 3$

## Solving Equations Using Zero Sums

9)  $3x - 4 = 2x - 5$  "x = ?" goal

$$\begin{array}{r}
 -2x \quad \uparrow -2x \\
 x - 4 = -5 \\
 +4 \quad \uparrow +4 \\
 \boxed{x = -1}
 \end{array}$$

10)  $-2x + 3 = -3x - 1$

$$\begin{array}{r}
 +2x \quad +2x \\
 3 = -x - 1 \\
 +1 \quad +1 \\
 4 = -x \\
 -4 = x \\
 \boxed{x = -4}
 \end{array}$$

$$-2x + 3 = -3x - 1$$

$$+3x \quad +3x$$

$$x + 3 = -1$$

$$-3 \quad -3$$

$$\boxed{x = -4}$$

Practice  
4-1