

November 11, 2016  
 Do 6.3 & 6.4  
 for Monday!

Nov 11-9:51 AM

$ax^2 + bx + c = 0$   
 General Form of a Quadratic Equation  
 $x^2 - x - 56 = 0$   
 $(x-8)(x+7) = 0$   
 \* Zero Product Property  
 $a \cdot b = 0$   
 ①  $a = 0$   
 $0 \cdot (-4) = 0$   
 ②  $b = 0$   
 $5 \cdot 0 = 0$   
 ③  $a \cdot b = 0$   
 $0 \cdot 0 = 0$   
 ①  $x - 8 = 0$   
 $x = 8$   
 ②  $x + 7 = 0$   
 $x = -7$   
 } our two solutions  
 ok  
 ①  $x = 8$   $x^2 - x - 56 = 0$   
 $(8)^2 - (8) - 56 = 0$   
 $64 - 8 - 56 = 0$   
 $56 - 56 = 0$   
 $0 = 0 \checkmark$   
 ②  $x = -7$   
 $(-7)^2 - (-7) - 56 = 0$   
 $49 + 7 - 56 = 0$   
 $56 - 56 = 0$   
 $0 = 0 \checkmark$

Nov 11-10:05 AM

Solve  
 $26x - 9 = -3x^2$   
 $+3x^2$  quadratic  
 To solve, set equal to zero  
 $3x^2 + 26x - 9 = 0$   
 $ac = -27$   
 $b = +26$   
 $\frac{+}{-}$   
 $\frac{27}{1}$   
 $3x^2 + 27x - x - 9 = 0$   
 $3x(x+9) - 1(x+9) = 0$   
 $(x+9)(3x-1) = 0$   
 ①  $x+9=0$   
 $x = -9$   
 ②  $3x-1=0$   
 $3x = 1$   
 $x = \frac{1}{3}$   
 ok  
 $x = \frac{1}{3}$   $26x - 9 = -3x^2$   
 $26(\frac{1}{3}) - 9 = -3(\frac{1}{3})^2$   
 $\frac{26}{3} - 9 = -3(\frac{1}{9})$   
 $\frac{26-27}{3} = -\frac{1}{3}$   
 $-\frac{1}{3} = -\frac{1}{3} \checkmark$

Nov 11-10:13 AM

$$2x^2 = 13x + 45$$

Nov 11-10:22 AM

Factoring Special Forms  
 $(x+5)(x-5)$   
 $= x^2 - 5x + 5x - 25$   
 $= x^2 - 25$   
 ↓  
 Difference of Two Squares

Nov 11-10:41 AM

Difference of Two Squares  
 $(a+b)(a-b) = a^2 - b^2$   
 $x^2 - 49 = (x+7)(x-7)$   
 $a = x \quad b = 7 \quad x^2 - 7x + 7x - 49$   
 $x^2 - 49 \checkmark$

Nov 11-10:44 AM