

10.12.15

Unit Test on Friday!

Factor and solve the following equation. Remember to get the equation equal to zero first and look for a GCF.

$$12x^3 + 28x^2 = -16x$$

$$+16x + 16x$$

$$12x^3 + 28x^2 + 16x = 0$$

$$4x(3x^2 + 7x + 4) = 0$$

a.c

12	
4	3
	7
	6

(Note: This diagram is crossed out with a large blue 'X')

$3x^2$	$3x$
$4x$	4

(Note: Red arrows indicate factoring: $3x$ from $3x^2$ and 4 from $4x$ to get $3x+4$; x from $3x^2$ and 1 from $3x$ to get $x+1$)

$$4x(x+1)(3x+4) = 0$$

Solve:

$\cancel{4}x = 0$
 $\frac{x}{4} = \frac{0}{4}$
 $x = 0$

$x + 1 = 0$
 $-1 \quad -1$
 $x = -1$

$3x + 4 = 0$
 $-4 \quad -4$
 $\frac{3x}{3} = \frac{-4}{3}$
 $x = -\frac{4}{3}$