

November 3, 2015

* Office Hours cancelled today!

#5) $21v^3 - 84v^2 + 15v - 60$

$21v^2(v-4) + 15(v-4)$

* $(v-4)(21v^2 + 15)$
HCF = 3

$(v-4)(7v^2 + 5)$ fully factored

* $(3v-12)(7v^2 + 5)$

Nov 3-9:06 AM

-8^2

$(-8)^2$

Nov 3-9:15 AM

Difference of Two Squares

$a^2 - b^2 = (a+b)(a-b)$
Difference

$a^2 + b^2 \rightarrow$ Is Not factorable!

Nov 3-9:17 AM

$100y^2 - a^2b^2$

$a = 10y$
 $b = ab$

$(10y + ab)(10y - ab)$

$(10y)^2 = (10y)(10y) = 100y^2$

$100y^2 - 10yab + 10yab - a^2b^2$

$(10)^2 = 100$

Nov 3-9:20 AM

$49x^2 - 64y^2$

$a = 7x$
 $b = 8y$

$(7x + 8y)(7x - 8y)$

Nov 3-9:23 AM

Solving Equations using factoring

$ac = -90$
 $b = 1$

$x^2 + x - 90 = 0$

$(x+10)(x-9) = 0$ always not equal to zero.

① $(x+10) = 0$
 $x + 10 = 0$
 $x = -10$

② $(x-9) = 0$
 $x - 9 = 0$
 $x = 9$

use the Zero Factor Property

Ok

① $x = -10$
 $x^2 + x - 90 = 0$
 $(-10)^2 + (-10) - 90 = 0$
 $100 - 10 - 90 = 0$
 $90 - 90 = 0$
 $0 = 0$

② $x = 9$
 $(9)^2 + (9) - 90 = 0$
 $81 + 9 - 90 = 0$
 $90 - 90 = 0$
 $0 = 0$

Nov 3-9:25 AM

Zero Factor Property

$$a \cdot b = 0$$

- ① $a = 0$
- ② $b = 0$
- ③ $a \neq b = 0$

Nov 3-9:29 AM

$$4x^2 - 25 = 0$$

Diff. of two squares

$$(2x+5)(2x-5) = 0$$

- ① $2x + 5 = 0 - 5$
 $\frac{2x}{2} = \frac{-5}{2}$
 $x = -\frac{5}{2}$
- ② $2x - 5 = 0 + 5$
 $\frac{2x}{2} = \frac{5}{2}$
 $x = \frac{5}{2}$

ck

$$x = -\frac{5}{2}$$

$$4x^2 - 25 = 0$$

$$4\left(-\frac{5}{2}\right)^2 - 25 = 0$$
~~$$4\left(\frac{25}{4}\right) - 25 = 0$$~~

$$25 - 25 = 0$$

$$0 = 0$$

Nov 3-9:37 AM

$$x^2 - 13x + 40 = 0$$

$ac = 40$
 $b = -13$

-	-
8	5

$$x^2 - 8x - 5x + 40 = 0$$

$$x(x-8) - 5(x-8) = 0$$

$$(x-8)(x-5) = 0$$

- ① $x - 8 = 0$
 $x = 8$
- ② $x - 5 = 0$
 $x = 5$

Nov 3-9:42 AM



Nov 3-9:50 AM