April 6, 2016

6.2 #30) $6x^2 = -14x$ (2 solutions)

① Set equal to zero

$6x^2 + 14x = 0$

② Factor out the GCF

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

$a \cdot b = 0$

③ Use Zero Product Property

① $\frac{2x}{2} = \frac{0}{2}$

$x = 0$

② $3x + 7 = 0$

$3x = -7$

$x = -\frac{7}{3}$

Apr 6-9:04 AM

6.3 Factoring Trinomials of the form $ax^2 + bx + c$, where $a = 1$

$x^2 - 2x + 5$

$a = 1 \quad b = -2 \quad c = 5$

$4x = -x^2 + 6$

$+x^2 - 6 \quad +x^2 - 6$

$x^2 + 4x - 6$

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$(x+5)(x+3)$ F O I L

$x^2 + 3x + 5x + 15$

Collect O & I = b

$x^2 + 8x + 15$

$a = 1 \quad b = +8 \quad c = +15$

Apr 6-9:18 AM

$x^2 + 8x + 15$ $a=1$ $b=8$ $c=15$

Use the ac & b Method

① Always factor out a GCF if possible.

② find $ac = (1)(15) = 15$

③ find b = Sum = 8

④ Create a Table as follows:

+	+	ac=15	b=8
1	15	✓	✗
3	5	✓	✓

⑤ $x^2 + 3x + 5x + 15$

⑥ Factor by Grouping

$x(x+3) + 5(x+3)$

Factor out binomial GCF

$(x+3)(x+5)$

⑦ Check by FOIL

Apr 6-9:23 AM

$x^2 + x - 12$ $\quad ac = 1 \cdot (-12) = -12$ $\quad b = 1$

+	−	ac	b
12	1	✓	✗
6	2	✓	✗
3	4	✓	✗
4	3	✓	✓

$x^2 + 4x - 3x - 12$

$x(x+4) - 3(x+4)$

$(x+4)(x-3)$ F O I L

$x^2 - 3x + 4x - 12$

$x^2 + x - 12$ ✓

Apr 6-9:45 AM

* Complete 6.1 & 6.2
* Read & Do Examples in 6.3

Apr 6-9:50 AM