Pg: 599: 12-23 (a), 25-33 (o)

12 B

13 B

14 B

15 $(z+1)(z+5)$

16 $(x+9)(x-1)$

17 $(b+8)(b-3)$

18 $(a-5)(a+4)$

19 $(r+4)(r+4)$

20 $(y-6)(y+3)$

21 $(n-10)(n+3)$

22 $(w+9)(w+4)$

23 $(b+8)(b-5)$

25 $2, -7$

27 $-1, -15$

29 $6, -9$

31 $4, 11$

33 $5, -13$

$b^2 + 3b - 40$

1·40
2·20
4·10
5·8

$(b-5)(b+8)$

$a^2 - a - 20$

1·20
2·10
4·5

$(a+4)(a-5)$

10.6 Factoring ax^2+bx+c

April 26, 2007

Recall factoring a Trinomial will result in 2 binomials

F. $\Rightarrow m \times n = a$

$$ax^2+bx+c = (mx+p)(nx+q)$$

L. $\Rightarrow p \times q = c$

$mq + np = b$

O. I.

Easy Prime #'s

Remember the Free Stuff

ex1) $2x^2+7x+3$

$1 \cdot 2 \qquad 1 \cdot 3$

$(1x+3)(2x+1)$

ex2) $2x^2+11x+5$

$1 \cdot 2 \qquad 1 \cdot 5$

$(1x+5)(2x+1)$

ex3) $3x^2+10x+3$

$1 \cdot 3 \qquad 1 \cdot 3$

$(1x+3)(3x+1)$

Not So Easy Not Prime #'s

ex4 | $6x^2+33x+15=$ $(1x+5)(6x+3)$ $(2x+1)(3x+15)$

? Is there any other Combination for the above Problem? Yes!

Why?

Because 6, 33, & 15 are all divis. By 3

Greatest Common Factor G.C.F.

The largest # and/or Letter that goes into every term!

*You Always Do This First

G.C.F.? 3

ex 5] Factor

$$6x^2 - 33x + 15$$

$$3(2x^2 - 11x + 5)$$

(1.2) (1.5)

$$3(1x - 5)(2x - 1)$$

ex6)

$20x^2 + 5x - 15$

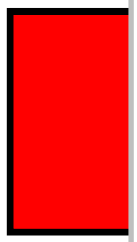
G.C.F.
5

$5(4x^2 + 1x - 3)$

1·4
2·2

1·3

$5(1x + 1)(4x - 3)$



Factor + Solve

ex 7)

$21n^2 + 14n + 7 = 6n + 11$

$-6n - 11 \quad -6n - 11$

1·21, 3·7 | 1·4, 2·2

$21n^2 + 8n - 4 = 0$

$(3n + 2)(7n - 2) = 0$

$3n + 2 = 0$ or $7n - 2 = 0$

$-2 \quad -3$ | $+2 \quad +2$

$3n = -2$ | $7n = 2$

$\frac{3n}{3} = \frac{-2}{3}$ | $\frac{7n}{7} = \frac{2}{7}$

$n = \frac{-2}{3}$ or $n = \frac{2}{7}$

O.T.L.

① pg 606-607

19-21(a)

23-39(o)

42-47(a)