

12	B	20	$(y-6)(y+3)$
13	B	21	$(n-10)(n+3)$
14	B	22	$(w+9)(w+4)$
15	$(z+1)(z+5)$	23	$(b+8)(b-5)$
16	$(x+9)(x-1)$	25	2, -7
17	$(b+8)(b-3)$	27	-1, -15
18	$(a-5)(a+4)$	29	6, -9
19	$(r+4)(r+4)$	31	4, 11
		33	5, -13

# 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

$$\begin{array}{l} \text{ex1) } \overset{1.2}{2x^2} + \overset{1.3}{7x} + 3 \\ \underline{\underline{(1x+3)(2x+1)}} \end{array}$$

$$\begin{array}{l} \text{ex2) } \overset{1.2}{2x^2} + \overset{1.5}{11x} + 5 = \\ \underline{\underline{(1x+5)(2x+1)}} \end{array}$$

$$\begin{array}{l} \text{ex3) } \overset{1.3}{3x^2} + \overset{1.3}{10x} + 3 = \\ \underline{\underline{(1x+3)(3x+1)}} \end{array}$$

/

## Not So Easy Not Prime #'s

$$\text{ex4} \mid 6x^2 + 33x + 15 = (3x+15)(2x+1) \\ (1x+5)(6x+3)$$

? Is there any other combination  
for the above problem? Yes!

Why?

6, 33, 15 are all  
Multiples of 3

# Greatest Common Factor G.C.F.

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

\* You Always Do This First

ex 5) Factor

$$6x^2 - 33x + 15$$
$$\left\{ \begin{array}{l} 1.2 \\ 2x^2 - 11x + 5 \end{array} \right.$$
$$3(1x - 5)(2x - 1)$$

G.C.F.?
3

ex 6)

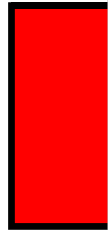
$$20x^2 + 5x - 15$$

$$5 \left( 4x^2 \oplus x - 3 \right)$$

*(Note: In the original image, the coefficient 4 has a blue '1·4' above it and a '2·2' below it. The coefficient 1 has a red '1·3' above it. The plus sign is circled in purple.)*

$$\underline{\underline{5 (x+1)(4x-3)}}$$

G.C.F.  
5



## Factor + Solve

ex 7)

$$2n^2 + 14n + 7 = 6n + 11$$
$$\begin{array}{r} \phantom{2}n^2 + 14n + 7 \\ - 6n - 11 \\ \hline 2n^2 + 8n - 4 = 0 \end{array}$$

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

$$\begin{array}{l} 3n+2=0 \\ -2 \quad -2 \\ \hline 3n = -2 \\ \frac{3n}{3} = \frac{-2}{3} \\ X = -\frac{2}{3} \end{array} \quad \text{or} \quad \begin{array}{l} n-2=0 \\ +2 \quad +2 \\ \hline n = 2 \\ X = 2 \end{array}$$

O.T.L.

① pg 606-607

19-21(a)

23-39(o)

42-47(a)

Grades must  
Be signed  
& Returned

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