

Algebra 1 BE ~

Monday 1-23-12

- ① DEFINE the ZPP
 - ② SOLVE: $(x-6)(3x+4) = 0$
 - ③ SOLVE: $x(2x-1) = 0$
 - ④ FACTOR AND SOLVE: $4x^2 + 12x = 0$
 - ⑤ SOLVE: $7x^2 = 6x$
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• Homework review Pg. 484 #4-12

FACTORING TECHNIQUES (Methods)

1 \Rightarrow GCF "PULL-OUT" THE GCF
AND "UNDO" THE D. P.
(distributive property)

2 \Rightarrow FBG "FACTOR BY GROUPING

ONE of the few techniques
to try ON POLYNOMIALS
WITH 4, or sometimes more,
terms.

(EX) Can you factor this using
the GCF?

$$4ab + 8b + 3a + 6$$

No, NO GCF for ALL 4 terms.

Try FBG

CAN YOU MAKE 2 groups WITH
A GCF just for EACH group?

$$4ab + 8b + 3a + 6$$

↑
Yes, GCF
is 4b

↑
Yes GCF is
3

Group: $(4ab + 8b) + (3a + 6)$

GCF
EACH
Group: $4b(a + 2) + 3(a + 2)$

STOP AND
CHECK, ARE THE 2 groups NOW EQUAL?

If NOT, STOP

If so, the GCF of EACH group is $(a + 2)$

$$\boxed{\underline{\underline{(a+2)}} (4b+3)}$$

GCF

EX 2
Pg 482

Is there ANOTHER way?

You can REARRANGE THE TERMS
TO TRY AND GET groups WITH GCF's

$$4ab + 8b + 3a + 6$$

$$4ab + 3a + 8b + 6$$

$$(4ab + 3a) + (8b + 6)$$

$$\underline{a(4b + 3)} + 2(\underline{4b + 3})$$

$$\rightarrow \boxed{(4b + 3)(a + 2)}$$

SAME AS $(a + 2)(4b + 3)$ ✓

WATCH OUT if there is A NEGATIVE RIGHT WHERE YOU WANT TO PUT A PARENTHESES.

EX $5y^2 - 15y + 4y - 12$

NO problem, just group

$(5y^2 - 15y) + (4y - 12)$

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

$(y - 3)(5y + 4)$

EX $5y^2 + 4y - 15y - 12$

WATCH OUT, THE - goes WITH THE -15y NOT - (15y - 12)

$(5y^2 + 4y) + (-15y - 12)$

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

FACTOR A - TO 'CHANGE ALL SIGNS'

$(5y + 4)(y - 3)$



PRACTICE: HW #9

⑨ $5c - 10c^2 + 2d - 4cd$

Homework: Pg 484 # 28-32

Tip:

FBG - 3 ways to arrange the terms BUT...

Either 2 of 3 work or 0 of 3 work -- no other options.

So the most you should try to "rearrange" is one time.