

BE-1B MONDAY 11-27-06

MULTIPLY:

① $4a(3a + 4)$

② $9x(x + 4)$

③ $8xz(2 - 5z)$

④ $3cd(6d + 4c + 3)$

IN GENERAL, WHEN YOU MULTIPLY
POLYNOMIALS YOU ARE TAKING SIMPLER
POLYNOMIALS AND PUTTING THEM TOGETHER
INTO ONE BIGGER POLYNOMIAL.

WHEN YOU FACTOR A POLYNOMIAL, YOU
DO THE OPPOSITE.

①

How do you factor?

$$\begin{array}{cc} 12a^2 & + & 16a \\ / \quad \backslash & & / \quad \backslash \\ \text{GCF} & & \text{GCF} \end{array}$$

By "pulling out" the GCF AND SEEING WHAT FACTOR is left in EACH term.

WHAT is the GCF of $12a^2$, $16a$?

GCF is $4a$

WHAT factor is left in EACH term?

$$\begin{array}{cc} 12a^2 & + & 16a \\ / \quad \backslash & & / \quad \backslash \\ 4a^2 & & 4a^2 \\ \uparrow & & \uparrow \\ 3a & & 4 \end{array}$$

$$\boxed{4a(3a + 4)}$$

$\uparrow$ $\uparrow$ $\uparrow$
 GCF LEFTOVER LEFTOVER
 FACTOR FACTOR

Check?

Factor:

$$9x^2 + 36x$$

$$9x(x + 4)$$

$$16xz - 40xz^2$$

$$8xz(2 - 5z)$$

$$18cd^2 + 12c^2d + 9cd$$

$$3cd(6d + 4c + 3)$$

Your turn: Pg. 484

⑥ $24m^2np^2 + 36m^2n^2p$

⑦ $2a^3b^2 + 8ab + 16a^2b^3$

Homework:

- Read Ch. 9-2
 - Pg 484 # 16 → 25
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