

BE-1B TUESDAY 11-28-06

① Factor: $8x^5y^3z + 24x^4y$

② Simplify: $(x+4)(2x+6)$

③ Simplify: $(x-3)^2$

If $xy = 0$ WHAT CAN YOU SAY ABOUT x OR y ?

* ZERO PRODUCT PROPERTY
"ZPP" If $ab = 0$,
then either $a = 0$,
 $b = 0$ or both
 a AND $b = 0$

Ex) $(x-3)(x-9) = 0$

$x = \{3, 9\}$

①

USE ZPP to solve:

$$(x-9)(x-6) = 0$$

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

$$(x-5)(2x+4) = 0$$

$$(x+1)(3x-6) = 0$$

$$(x-1)(5x+10) = 0$$

$$(x-2)(x+3)(x-8) = 0$$

$$(d-5)(3d+4) = 0$$

↑↑
EXAMPLE 4 Pg 483

(2)

If you can SET THE FACTORS
OF AN EQUATION EQUAL TO zero,
you can THEN SOLVE IT USING ZPP.

- SET Equation = 0
- FACTOR GCF
- ZPP it!

Ex 5 Pg 483 Solve:

$$\begin{array}{rcl} x^2 & = & 7x \\ -7x & -7x & \end{array} \quad \text{Set = to zero}$$

$$x^2 - 7x = 0 \quad \text{GCF}$$

$$x(x - 7) = 0$$

$$\boxed{x = \{0, 7\}}$$

CK 0 $(0)^2 \stackrel{?}{=} 7(0) \checkmark$

CK 7 $(7)^2 \stackrel{?}{=} 7(7) \checkmark$

Your turn:

Solve: $3m^2 = 5m$

Pg. 484 #10 $h(h+5)=0$

#11 $(N-4)(N+2)=0$

Homework: Pg. 485

#48-55
