8 - 8
Special Products

Square of a Sum

$(a + b)^2 = a^2 + 2ab + b^2$

Square of a Difference

$(a - b)^2 = a^2 - 2ab + b^2$

Ex: $(\overset{a}{x} + \overset{b}{3})^2 =$ $x^2 + 6x + 9$

Ex: $(4y + 5)^2 =$ $16y^2 + 40y + 25$

Ex: $(3x - 2)^2 =$ $9x^2 - 12x + 4$

Ex: $(5m^3 - 2n)^2 =$ $25m^6 - 20m^3n + 4n^2$

$(5m^3)^2$ $\quad 10m^3n$

Product of a Sum and a Difference

$$(a + b)(a - b) = a^2 - b^2$$

$(a+b)(a+b)$

$(a-b)(a-b)$

Ex: $(x + 4)(x - 4) =$ $x^2 - 16$

Ex: $(2x + 7)(2x - 7) =$ $4x^2 - 49$

Ex: $(11x - 8y^2)(11x + 8y^2) = 121x^2 - 64y^4$

$11^2 = 121$

$(8y^2)^2$

Homework:

p. 462 #14 - 30 even

$(\ +\ )^2 = \_\_ + \_\_ + \_\_$

$(\ -\ )^2 = \_\_ - \_\_ + \_\_$

$(+)(-) = \_\_ - \_\_$