Agenda

Homework:

- Special Products WS
- AM

Materials:

- Notebook
- Calculator (if needed)

Do Now:

- Take out homework
- Multiply the following binomials in your notebook:

  $(x + 4)(x + 4)$

  $(x - 5)(x - 5)$

  $(x + 8)(x - 8)$

  $(x - 6)(x + 6)$

Do Now

$(x + 4)(x + 4)$	$(x - 5)(x - 5)$
$(x + 8)(x - 8)$	$(x - 6)(x + 6)$

Find the product of $(2x + 3)^2$

- FOIL method

$(2x + 3)^2 =$ **$(2x + 3)(2x + 3)$**

F	$(2x)(2x) = 4x^2$
O	$(2x)(3) = 6x$
I	$(3)(2x) = 6x$
L	$(3)(3) = 9$

$6x + 6x = 12x$

$4x^2 + 12x + 9$

- Using what we know about Special Products:
  - ☑ Square of a Sum?
  - ❑ Square of a Difference?
  - ❑ Product of a Sum & Difference?

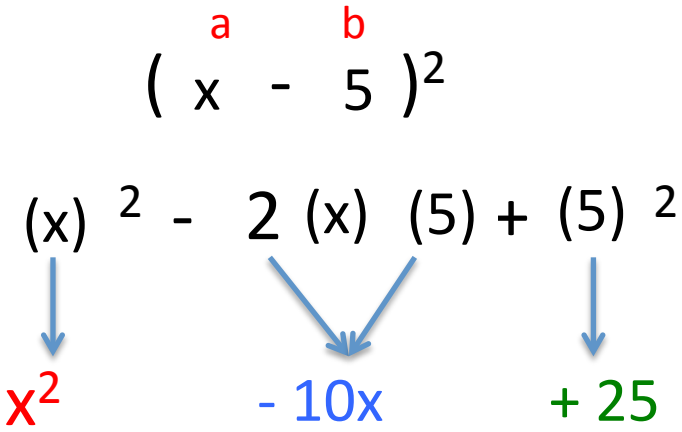
$$(\underset{a}{2x} + \underset{b}{3})^2$$

$$(2x)^2 + 2(2x)(3) + (3)^2$$

$4x^2 \quad + 12x \quad + 9$

Find the product of $(x - 5)^2$

- Using what we know about Special Products:
  - ❑ Square of a Sum?
  - ☑ Square of a Difference?
  - ❑ Product of a Sum & Difference?



Find the product of (4x – 6)(4x + 6)

- Using what we know about Special Products:
  - ❑Square of a Sum?
  - ❑Square of a Difference?
  - ☑Product of a Sum & Difference?

a b a b

$(4x - 5)(4x + 5)$

$(4x)^2 - (6)^2$

$16x^2 - 36$

Summary

- Special Products:
  - Some binomials have product that follow a specific pattern as shown below:
    - "SQUARE of a Sum or Difference":
      - SUM: $\mathbf{(a + b)^2} = a^2 + 2ab + b^2$
      - DIFFERENCE: $\mathbf{(a - b)^2} = a^2 - 2ab + b^2$
    - "Product of a Sum AND Difference":
      - $\mathbf{(a + b)(a - b)} = a^2 - b^2$

Exit Pass

- $(3x + 5)^2$
- $(2x – 4)^2$
- $(x + 6)(x – 6)$