MAᵗh on the Fly!

NAME: _____   DATE: _____

Multiplying Polynomials Using the F.O.I.L. Method

Multiply and find the answer to each problem below.

1. $(x + 4)(x + 5)$ **2.** $(y - 9)(y + 2)$

3. $(a - 10)(a - 6)$ **4.** $(b + 7)(b - 3)$

5. $(x + 9)^2$ **6.** $(x + 4)(x - 4)$

7. $(4x + 1)(6x - 7)$ **8.** $(9x - 2)(9x + 2)$

9. $(5x - 4y)(x + 10y)$ **10.** $(8x - 3)^2$

11. $(2x + 5)(3x + 8)$ **12.** $(7a - 2b)(11a - 3b)$

13. $(x^2 + 9)(x - 6)$ **14.** $(3a + 5b)(9c + 4d)$

SOLUTIONS

1. $x^2 + 9x + 20$

2. $y^2 - 7y - 18$

3. $a^2 - 16a + 60$

4. $b^2 + 4b - 21$

5. $x^2 + 18x + 81$

NOTE: $(x + 9)^2 = (x + 9)(x + 9)$

6. $x^2 - 16$

7. $24x^2 - 22x - 7$

8. $81x^2 - 4$

9. $5x^2 + 46xy - 40y^2$

10. $64x^2 - 48x + 9$

NOTE: $(8x - 3)^2 = (8x - 3)(8x - 3)$

11. $6x^2 + 31x + 40$

12. $77a^2 - 43ab + 6b^2$

13. $x^3 - 6x^2 + 9x - 54$

14. $27ac + 12ad + 45bc + 20bd$