

Multiplying Binomials – Day 2

Homework Worksheet

1. Expand and simplify.

a. $(x^2 + 1)^2$

b. $(x^2 + y^2)^2$

c. $(3y^2 - 4)^2$

d. $(x^2 + 1)(x^2 - 1)$

e. $(y^2 - 2)(y^2 + 2)$

f. $(8a^2 + 3)(8a^2 - 3)$

2. Expand and simplify.

a. $2(x + 3)(x + 5)$

b. $4(x - 9)(x + 5)$

c. $-(a + 3)(a - 2)$

d. $10(x + 7)(x - 5)$

e. $3(2x - 1)(3x - 2)$

f. $-2(4y + 1)(y - 3)$

3. Expand and simplify.

a. $2(3x + 2)^2 - 3(2x - 1)^2$

b. $(x + 4)^2 + (x - 2)^2$

c. $(y + 6)(y - 6) + (y + 7)^2$

d. $(m - 8)^2 - (m - 1)(m + 1)$

4. Expand and simplify.

a. $2(a + 3)(a - 3) + 3(a + 2)^2$

b. $5(3x - 1)^2 - 4(4x - 5)(4x + 5)$

c. $3x^2 - (3 - 2x)^2 + 5(2x - 1)(2x + 1)$

d. $-\frac{1}{2}(2x - 8)^2 + 22$

e. $-3(x + 7)^2 - 15$

f. $4(x - 3)(2x - 5) + 11$

5. Expand and simplify.

a. $(x + 1)^2 - (x - 1)^2$

b. $(x + 3)(x - 3) - (x + 2)^2$

c. $3(4y + 3)^2 - (2y + 1)^2$

d. $2(3 + 2m)^2 - 3(4m - 1)^2$