

Multiplying Polynomials

Coloring Activity

Simplify each expression. Write the answer in a color of your choice.

1 $(a + 4)(a + 7)$

2 $(a - 7)(a - 3)$

3 $(a - 7)(a - 5)$

4 $(3x - 4)(2x - 8)$

5 $(x - 2)(x + 1)$

6 $(x - 1)(x^2 + 6x - 1)$

7 $(x - 8)(x - 2)$

8 $(x + 6)(x - 3)$

9 $(4x + 1)(3x - 4)$

10 $(2x - 6)(x + 2)$

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Answers

$$1 \quad (a + 4)(a + 7)$$

$$= a^2 + 7a + 4a + 28$$

$$= a^2 + 11a + 28$$

$$2 \quad (a - 7)(a - 3)$$

$$= a^2 - 3a - 7a + 21$$

$$= a^2 - 10a + 21$$

$$3 \quad (a - 7)(a - 5)$$

$$= a^2 - 5a - 7a + 35$$

$$= a^2 - 12a + 35$$

$$4 \quad (3x - 4)(2x - 8)$$

$$= 6x^2 - 24x - 8x + 32$$

$$= 6x^2 - 32x + 32$$

$$5 \quad (x - 2)(x + 1)$$

$$= x^2 + x - 2x - 2$$

$$= x^2 - x - 2$$

$$6 \quad (x - 1)(x^2 + 6x - 1)$$

$$= x^3 + 6x^2 - x - x^2 - 6x + 1$$

$$= x^3 + 5x^2 - 7x + 1$$

$$7 \quad (x - 8)(x - 2)$$

$$= x^2 - 2x - 8x + 16$$

$$= x^2 - 10x + 16$$

$$8 \quad (x + 6)(x - 3)$$

$$= x^2 - 3x + 6x - 18$$

$$= x^2 + 3x - 18$$

$$9 \quad (4x + 1)(3x - 4)$$

$$= 12x^2 - 16x + 3x - 4$$

$$= 12x^2 - 13x - 4$$

$$10 \quad (2x - 6)(x + 2)$$

$$= 2x^2 + 4x - 6x - 12$$

$$= 2x^2 - 2x - 12$$
