



Name: _____

Date: _____

Polynomial Operations

Solve for x. Show your work.

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

2. $(x^2 - 4x + 4) + (-x^2 - 2x - 1)$

3. $(2x^3 + 2x^2 - 3) - (-2x^2 - 4x - 4)$

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

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

6. $4x \cdot (-3x + 5)$

7. $5x^2 \cdot (-x - 4)$

8. $(5x + 1) + (3x^2 + 5x - 5)$



Polynomial Operations – Answer Key

1. $(2x^3 + x^2 - 4x + 2) - (3x^2 + 2x - 4)$
 $2x^3 - 2x^2 - 6x + 6$

2. $(x^2 - 4x + 4) + (-x^2 - 2x - 1)$
 $-6x + 3$

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

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

5. $(3x^2 + 5x + 4) + (5x - 4)$
 $3x^2 + 10x$

6. $4x \cdot (-3x + 5)$
 $-12x^2 + 20x$

7. $5x^2 \cdot (-x - 4)$
 $-5x^3 - 20x^2$

8. $(5x + 1) + (3x^2 + 5x - 5)$
 $3x^2 + 10x - 4$