Quiz: Polynomial

Section: Addition and Subtraction of Polynomials

Sub-section: Addition and Subtraction of Polynomials

Choose the correct answer.

1. Simplify $6a - 8a - 4a + 3a$.

   (understand MA 1.2 G.8/1)

   A. $-9a$

   B. $-3a$

   C. $-a$

   D. $5a$

   Solution $-3a$

   $6a - 8a - 4a + 3a = (6 - 8 - 4 + 3)a = -3a$

2. Simplify $7x - 5x - 3x - 3x$.

   (understand MA 1.2 G.8/1)

   A. $-4x$

   B. $2x$

   C. $4x$

   D. $8x$

   Solution $-4x$

   $7x - 5x - 3x - 3x = (7 - 5 - 3 - 3)x = -4x$

3. Evaluate $\left(-5a^2 + 2a + 2\right) + \left(-6a^2 + 2a - 8\right)$.

   (understand MA 1.2 G.8/1)

   A. $-11a^2 - 10$

   B. $-11a^2 - 6$

   C. $-11a^2 + 4a - 6$

   D. $-11a^2 + 4a + 10$

   Solution $-11a^2 + 4a - 6$

   $\left(-5a^2 + 2a + 2\right) + \left(-6a^2 + 2a - 8\right) = \left(-5a^2 - 6a^2\right) + (2a + 2a) + (2 - 8)$

   $= -11a^2 + 4a - 6$

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4. Evaluate $\left(2x^2 + 5x - 8\right) + \left(-9x^2 + 3x - 6\right)$.
(understand MA 1.2 G.8/1)

   A. $-11x^2 + 2x - 14$

   B. $-11x^2 + 8x - 2$

   C. $-7x^2 + 8x - 14$

   D. $-7x^2 + 8x - 2$

   Solution $-7x^2 + 8x - 14$

   $\left(2x^2 + 5x - 8\right) + \left(-9x^2 + 3x - 6\right) = \left(2x^2 - 9x^2\right) + (5x + 3x) + (-8 - 6)$

   $= -7x^2 + 8x - 14$

5. Evaluate $\left(-9p^2 + 8p - 5\right) - \left(8p^2 + 9p + 4\right)$.
(understand MA 1.2 G.8/1)

   A. $-17p^2 - p - 9$

   B. $-17p^2 + 17p - 1$

   C. $-p^2 - p - 9$

   D. $-p^2 + 17p - 1$

   Solution $-17p^2 - p - 9$

   $\left(-9p^2 + 8p - 5\right) - \left(8p^2 + 9p + 4\right) = \left(-9p^2 - 8p^2\right) + (8p - 9p) + (-5 - 4)$

   $= -17p^2 - p - 9$

6. Evaluate $\left(-4p^2 + 5p - 8\right) - \left(-p^2 - 3p - 2\right)$.
(understand MA 1.2 G.8/1)

   A. $-5p^2 + 2p - 10$

   B. $-3p^2 + 2p - 6$

   C. $-3p^2 + 8p - 10$

   D. $-3p^2 + 8p - 6$

   Solution $-3p^2 + 8p - 6$

   $\left(-4p^2 + 5p - 8\right) - \left(-p^2 - 3p - 2\right) = \left(-4p^2 + p^2\right) + (5p + 3p) + (-8 + 2)$

   $= -3p^2 + 8p - 6$

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7. Evaluate $\left(3a^2 + 9a + a^3 + 6\right) + \left(a^3 - 2a^2 + a - 3\right)$.
   (understand MA 1.2 G.8/1)

   A. $2a^3 - a^2 + 10a + 3$

   B. $2a^3 + a^2 + 10a + 3$

   C. $4a^3 - a^2 + 10a + 3$

   D. $4a^3 + 7a^2 + 2a + 3$

   Solution $2a^3 + a^2 + 10a + 3$

   $\left(3a^2 + 9a + a^3 + 6\right) + \left(a^3 - 2a^2 + a - 3\right) = \left(a^3 + a^3\right) + \left(3a^2 - 2a^2\right) + (9a + a) + (6 - 3)$

   $= 2a^3 + a^2 + 10a + 3$

8. Evaluate $\left(5x^2 + 3x^3 - x + 6\right) - \left(4x^2 - 8x^3 + 5x - 2\right)$.
   (understand MA 1.2 G.8/1)

   A. $x^3 - 5x^2 - 6x + 4$

   B. $x^3 + 11x^2 - 6x + 8$

   C. $11x^3 + x^2 + 4x + 4$

   D. $11x^3 + x^2 - 6x + 8$

   Solution $11x^3 + x^2 - 6x + 8$

   $\left(5x^2 + 3x^3 - x + 6\right) - \left(4x^2 - 8x^3 + 5x - 2\right)$

   $= \left(3x^3 + 8x^3\right) + \left(5x^2 - 4x^2\right) + (-x - 5x) + (6 + 2)$

   $= 11x^3 + x^2 - 6x + 8$