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

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

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

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

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

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

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 $- 17p^2 - p - 9$

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

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

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

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

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

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

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

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

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

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

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

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