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**Math\_Questions\_0010**

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For problems 1 - 7, add the polynomials.

1.  $(6x + 1) + (-7x + 2)$

ANS:

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

ANS:

3.  $(0.5x^4 - 0.6x^2 + 0.7) + (2.3x^4 + 1.8x - 3.9)$

ANS:

4.  $\left(\frac{1}{3}x^9 + \frac{1}{5}x^5 - \frac{1}{2}x^2 + 7\right) +$

$$\left(-\frac{1}{5}x^9 + \frac{1}{4}x^4 - \frac{3}{5}x^5 + \frac{3}{4}x^2 + \frac{1}{2}\right)$$

ANS:

5.  $(0.03x^6 + 0.05x^3 + 0.22x + 0.05) +$

$$\left(\frac{7}{100}x^6 - \frac{3}{100}x^3 + 0.5\right)$$

ANS:

6.  $(4x^5 - 6x^3 - 9x + 1) + (6x^3 + 9x^2 + 9x) +$

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

ANS:

7. 
$$\begin{array}{r} 0.05x^4 + 0.12x^3 - 0.5x^2 \\ -0.02x^3 + 0.02x^2 + 2x \\ 1.5x^4 \qquad + 0.01x^2 \qquad + 0.15 \\ 0.25x^3 \qquad \qquad \qquad + 0.85 \\ -0.25x^4 \qquad + 10x^2 \qquad - 0.04 \\ \hline \end{array}$$

ANS:

For problems 8 - 11, simplify.

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

ANS:

9.  $-(4x^3 - 6x^2 - 8x + 1)$

ANS:

10.  $-(-6a^3 + 2a^2 - 9a + 1)$

ANS:

11.  $-(-5x^4 + 4x^3 - x^2 + 0.9)$

ANS:

For problems 12 - 17, subtract the polynomials.

12.  $(6x + 1) - (-7x + 2)$

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

ANS:

ANS:

$$14. (0.5x^4 - 0.6x^2 + 0.7) - (2.3x^4 + 1.8x - 3.9) \quad 15. (0.8x^4 + 0.2x - 1) - \left(\frac{7}{10}x^4 + \frac{1}{5}x - 0.1\right)$$

ANS:

ANS:

$$16. \quad 5x^4 + 6x^2 - 3x + 6 \\ - (6x^3 + 7x^2 - 8x - 9)$$

ANS:

$$17. \quad x^5 + x^4 - x^3 + x^2 - x + 2 \\ - (x^5 - x^4 + x^3 - x^2 - x + 2)$$

ANS:

For problems 18 - 25, multiply the polynomials.

$$18. (4x^2)(-2x)$$

ANS:

$$19. \left(-\frac{1}{4}x^4\right)\left(\frac{1}{5}x^8\right)$$

ANS:

$$20. (4y^4)(y^3 - 6y^2)$$

ANS:

$$21. (3+x)(6+2x)$$

ANS:

$$22. \left(x + \frac{4}{3}\right)\left(x + \frac{3}{2}\right)$$

ANS:

$$23. (2x - 0.13)(2x - 0.13)$$

ANS:

$$24. (3a^2 - 5a + 2)(2a^2 - 3a + 4)$$

Solution:

$$25. \left(x + \frac{1}{3}\right)\left(6x^3 - 12x^2 - 5x + \frac{1}{2}\right)$$

Solution: