

Operations with Polynomials

Name: KEY

Add or subtract the following polynomials.

1.) $(6x + 4) + (x + 5)$

$$6x + x + 4 + 5$$

$$\boxed{7x + 9}$$

3.) $(2y^2 + y - 1) + (7y^2 + 4y - 3)$

$$2y^2 + 7y^2 + y + 4y - 1 - 3$$

$$\boxed{9y^2 + 5y - 4}$$

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

$$10a^2 - 3a^2 + 4a - 2a - 5 - 1$$

$$\boxed{7a^2 + 2a - 6}$$

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

$$4m^2 + 3m^2 - 5 - 2$$

$$\boxed{7m^2 - 7}$$

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

$$3x^2 - x^2 + 5 - 2$$

$$\boxed{2x^2 + 3}$$

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

$$m^2 + m^2 - 3m - 5m + 4 - 1$$

$$\boxed{2m^2 - 8m + 3}$$

Find the product.

7.) $x^2(6x^2 - 3x - 1)$

$$\boxed{6x^4 - 3x^3 - x^2}$$

8.) $-5a^3(4a^4 - 3a + 1)$

$$\boxed{-20a^7 + 15a^4 - 5a^3}$$

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

$$\boxed{-8d^5 + 20d^4 - 24d^3 + 8d^2}$$

10.) $(2y + 3)(y - 5)$

$$2y^2 - 10y + 3y - 15$$

$$\boxed{2y^2 - 7y - 15}$$

11.) $(6a - 3)(4a - 1)$

$$24a^2 - 6a - 12a + 3$$

$$\boxed{24a^2 - 18a + 3}$$

12.) $(-p + 2)(3p^2 + 1)$

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

$$\boxed{-3p^3 + 6p^2 - p + 2}$$

13.) $(n + 1)(n^2 + 4n + 5)$

$$n^3 + 4n^2 + 5n + n^2 + 4n + 5$$

$$\boxed{n^3 + 5n^2 + 9n + 5}$$

14.) $(w - 3)(w^2 + 8w + 1)$

$$w^3 + 8w^2 + w - 3w^2 - 24w - 3$$

$$\boxed{w^3 + 5w^2 - 23w - 3}$$