

Polynomials Workday - Unit 7B Review

Write each polynomial in standard form. Then name each polynomial by degree and number of terms.

1) $-9n^2 - 3n^3 + 10$

$$-3n^3 - 9n^2 + 10$$

Cubic Trinomial

2) $9x^2 + 8x^5$

$$8x^5 + 9x^2$$

Quintic Binomial

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

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

Quartic Polynomial

4) 9

Constant monomial

Simplify each expression. Leave your answer in standard form.

5) $(2p^3 + 8p) - (p^3 - 4p - 4p^2)$

$$2p^3 + 8p - p^3 + 4p + 4p^2$$

$$p^3 + 4p^2 + 12p$$

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

$$-7x^4 + x^3 + 5x^2$$

7) $(6b^3 + 3b + 6b^2) + (6b - 7b^2 - b^3)$

$$5b^3 - b^2 + 9b$$

8) $(5n^2 + 8n^4 - n) - (2n^3 + 7n^4 - 6n^2)$

$$5n^2 + 8n^4 - n - 2n^3 - 7n^4 + 6n^2$$

$$n^4 - 2n^3 + 11n^2 - n$$

9) $3a(a - 8)$

$$3a^2 - 24a$$

10) $(4x - 4)(8x + 5)$

$$32x^2 + 20x - 32x - 20$$

$$32x^2 - 12x - 20$$

$$11) \overbrace{(7n+1)(5n+1)}$$

$$35n^2 + 7n + 5n + 1$$

$$\boxed{35n^2 + 12n + 1}$$

$$12) \overbrace{(4v+3)(2v^2-7v-3)}$$

$$8v^3 - 28v^2 - 12v + 6v^2 - 21v - 9$$

$$\boxed{8v^3 - 22v^2 - 33v - 9}$$

$$13) \overbrace{(b-2)(4b^2-3b+3)}$$

$$4b^3 - 3b^2 + 3b - 8b^2 + 6b - 6$$

$$\boxed{4b^3 - 11b^2 + 9b - 6}$$

$$14) (6x-8)(6x+8)$$

$$36x^2 + 48x - 48x - 64$$

$$\boxed{36x^2 - 64}$$

$$15) (2x-5)^2$$

$$\overbrace{(2x-5)(2x-5)}$$

$$4x^2 - 10x - 10x + 25$$

$$\boxed{4x^2 - 20x + 25}$$

16) The length of a rectangle is $4x - 6y$ and the width is $2x + 8y$.

a) What is the perimeter of the rectangle?

$$P = 2(2x + 8y) + 2(4x - 6y)$$

$$P = 4x + 16y + 8x - 12y$$

$$\boxed{P = 12x + 4y}$$

b) What is the area of the rectangle?

$$\overbrace{(2x+8y)(4x-6y)}$$

$$8x^2 - 12xy + 32xy - 48y^2$$

$$\boxed{8x^2 + 20xy - 48y^2}$$