

Reivew Problems:

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Name each polynomial by degree and number of terms.

1) $3a^5 - 10a^4 + 4a^3 + 6a^2 - 3a - 7$

quintic polynomial with six terms

2) $-3m^7 - 9m^6 + 10m^5 - 3m^3 + 8m - 4$

seventh degree polynomial with six terms

3) $5x^7 - 7x^2 - 9$

seventh degree trinomial

4) $-7x^4$

quartic monomial

Simplify each expression.

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

$6x^4 + 8x^3 - 4x^2 + 15$

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

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

Find each product.

7) $(8n + 7)(6n - 8)$

$48n^2 - 22n - 56$

8) $(3a - 5)(6a - 4)$

$18a^2 - 42a + 20$

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

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

$$10) (4b + 3)(4b^2 - 3b - 8)$$

$$16b^3 - 41b - 24$$

$$11) (4 + 8b)^2$$

$$16 + 64b + 64b^2$$

$$12) (7n + 6)^2$$

$$49n^2 + 84n + 36$$

Divide.

$$13) (24n^4 + 8n^3 + 24n^2) \div 8n$$

$$3n^3 + n^2 + 3n$$

$$14) (24n^3 + 8n^2 + 5n) \div 8n$$

$$3n^2 + n + \frac{5}{8}$$

$$15) (9r^3 + 2r^2 + 9r) \div 9r$$

$$r^2 + \frac{2r}{9} + 1$$

$$16) (9x^4 + 36x^3 + 27x^2) \div 9x^3$$

$$x + 4 + \frac{3}{x}$$