Name:

Date:

Operations with polynomials

Find each product.

1) $7(3a + 2)$

2) $(9x - 7)(x - 3)$

3) $2x^3(x^2 + 6x - 3)$

4) $4(x + 9)$

5) $-4x^5(x - 3)$

6) $(2x - 1)(6x + 3)$

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

8) $-x^6(-8x + 5)$

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

10) $3y^2(-y^2 + 6y)$

11) $(2a^2 - 3a + 1)(a^3 + 6a + 5)$

12) $(3m^4 + 2m - 1)(m + 1)$

13) $2(a^3 + 3a^2 + a + 1)(a^5 + 6a^1 + 5)$

14) $3(3a - 1)(a^2 - 4a + 2)$

15) $6(a^3 + 1)(-a^2 + 4a + 2)$

16) $2x^2(x^3 - 1)(x^2 + x - 3)$

Name:

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Operations with polynomials

Answers

Find each product.

1) $7(3a+2) = 21a+14$

2) $(9x-7)(x-3) = 9x^2-34x+21$

3) $2x^3(x^2+6x-3) = 2x^5+12x^4-6x^3$

4) $4(x+9) = 4x+36$

5) $-4x^5(x-3) = -4x^6+12x^5$

6) $(2x-1)(6x+3) = 12x^2-3$

7) $3(5x^2-2) = 15x^2-6$

8) $-x^6(-8x+5) = 8x^7-5x^6$

9) $5x^5(x^2+6x-3) = 5x^7+30x^6-15x^5$

10) $3y^2(-y^2+6y) = -3y^4+18y^3$

11) $(2a^2-3a+1)(a^3+6a+5) = 2a^5-3a^4+13a^3-8a^2-9a+5$

12) $(3m^4+2m-1)(m+1) = 3m^5+3m^4+2m^2+m-1$

13) $2(a^3+3a^2+a+1)(a^5+6a^1+5) = 2a^8+6a^7+2a^6+14a^5+12a^4+46a^3+42a^2+10$

14) $3(3a-1)(a^2-4a+2) = 9a^3-39a^2+30a-6$

15) $6(a^3+1)(-a^2+4a+2) = -6a^5+24a^4+12a^3-6a^2+24a+12$

16) $2x^2(x^3-1)(x^2+x-3) = 2x^7+2x^6-6x^5-2x^4-2x^3+6x^2$