



## Multiplying polynomials

**Find each product.**

1)  $(4x + 5y)(8x^2 + 10xy + y^2)$

2)  $(6a - 7b)(2a^2 - 9ab - 3b^2)$

3)  $(8x + 5y)(4x^2 - 3xy - 10y^2)$

4)  $(3u - 6v)(10u^2 - 9uv + 6v^2)$

5)  $(9a - 7b)(5a^2 - 2ab - 3b^2)$

6)  $(9x - 9y)(9x^2 - 4xy - y^2)$

$$7) (2m - 8n)(8m^2 - 3mn - 4n^2)$$

$$8) (4x - 2y)(5x^2 - 4xy + 8y^2)$$

$$9) (5m + 5n)(8m^2 - 9mn + 6n^2)$$

$$10) (8x - 2y)(7x^2 - 5xy - 4y^2)$$

$$11) (9x + 4y)(4x^2 + 3xy - 5y^2)$$

$$12) (10u - 3v)(10u^2 - uv + 8v^2)$$

$$13) (2x + 3y)(6x^2 + 2xy + 7y^2)$$

$$14) (3u - 4v)(3u^2 + 6uv + 7v^2)$$

$$15) (5x + 3y)(10x^2 + xy + 7y^2)$$

$$16) (7u - 4v)(5u^2 + 5uv + 7v^2)$$

$$17) (8x + 2y)(2x^2 + 9xy + 6y^2)$$

$$18) (10a - 5b)(9a^2 + 4ab + 6b^2)$$

$$19) (x + y)(5x^2 + 8xy + 6y^2)$$

$$20) (3a + 7b)(a^2 - 10ab - 2b^2)$$

$$21) (4x + y)(8x^2 - 6xy - 3y^2)$$

$$22) (6m + 7n)(4m^2 + 10mn - 3n^2)$$

$$23) (8x + 9y)(6x^2 + 4xy - 10y^2)$$

$$24) (9m + 6n)(7m^2 - 3mn - 3n^2)$$

$$25) (x - y)(3x^2 - 8xy - 4y^2)$$

$$26) (2x + 5y)(10x^2 - 4xy - 4y^2)$$

$$27) (3u - v)(6u^2 - uv - 4v^2)$$

$$28) (6x + 5y)(2x^2 - 5xy + 8y^2)$$

$$29) (7u - 2v)(9u^2 - 2uv + 8v^2)$$

$$30) (9x + 4y)(6x^2 + 2xy + 8y^2)$$

- 1)  $32x^3 + 80x^2y + 54xy^2 + 5y^3$   
 2)  $12a^3 - 68a^2b + 45ab^2 + 21b^3$   
 3)  $32x^3 - 4x^2y - 95xy^2 - 50y^3$   
 4)  $30u^3 - 87u^2v + 72uv^2 - 36v^3$   
 5)  $45a^3 - 53a^2b - 13ab^2 + 21b^3$   
 6)  $81x^3 - 117x^2y + 27xy^2 + 9y^3$   
 7)  $16m^3 - 70m^2n + 16mn^2 + 32n^3$   
 8)  $20x^3 - 26x^2y + 40xy^2 - 16y^3$   
 9)  $40m^3 - 5m^2n - 15mn^2 + 30n^3$   
 10)  $56x^3 - 54x^2y - 22xy^2 + 8y^3$   
 11)  $36x^3 + 43x^2y - 33xy^2 - 20y^3$   
 12)  $100n^3 - 40u^2v + 83uv^2 - 24v^3$   
 13)  $12x^3 + 22x^2y + 20xy^2 + 21y^3$   
 14)  $9u^3 + 6u^2v - 3uv^2 - 28v^3$   
 15)  $50x^3 + 35x^2y + 38xy^2 + 21y^3$   
 16)  $35u^3 + 15u^2v + 29uv^2 - 28v^3$   
 17)  $16x^3 + 76x^2y + 66xy^2 + 12y^3$   
 18)  $90a^3 - 5a^2b + 40ab^2 - 30b^3$   
 19)  $5x^3 + 13x^2y + 14xy^2 + 6y^3$   
 20)  $3a^3 - 23a^2b - 76ab^2 - 14b^3$   
 21)  $32x^3 - 16x^2y - 18xy^2 - 3y^3$   
 22)  $24m^3 + 88m^2n + 52mn^2 - 21n^3$   
 23)  $48x^3 + 86x^2y - 44xy^2 - 90y^3$   
 24)  $63m^3 + 15m^2n - 45mn^2 - 18n^3$   
 25)  $3x^3 - 11x^2y + 4xy^2 + 4y^3$   
 26)  $20x^3 + 42x^2y - 28xy^2 - 20y^3$   
 27)  $18u^3 - 9u^2v - 11uv^2 + 4v^3$   
 28)  $12x^3 - 20x^2y + 23xy^2 + 40y^3$   
 29)  $63u^3 - 32u^2v + 60uv^2 - 16v^3$   
 30)  $54x^3 + 42x^2y + 80xy^2 + 32y^3$