

Polynomials - two variables - integers

Simplify each expression.

1) $(10x^2y + 5y^4) + (8x^2y - 3y^4)$

2) $(3a^4b^2 - 2a^3b^2) - (9a^3b^2 - 5a^4b^2)$

3) $(8m^4n + 3n^3) - (3m^4n - n^3)$

4) $(7x^3y^4 + 8y^2) + (9x^3y^4 + y^2)$

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

6) $(4u^4v^4 - 10u^4v) - (10u^4v^4 + 6u^4v)$

$$7) (3xy^3 + 9x^4y^3) + (5x^4y^3 + 8xy^3)$$

$$8) (2a^2b^3 - 6a^2) + (10a^2 + 10a^2b^3)$$

$$9) (x^3y - 9x^4y^2) + (6x^3y - 9x^4y^2)$$

$$10) (9m^3 - 3mn^4) + (m^3 - 7mn^4)$$

$$11) (8x^4y^3 - 6xy) - (8xy - 5x^4y^3)$$

$$12) (7xy^3 + 5x^2) - (10x^2 + 5xy^3)$$

$$13) (6x^2y - 2x^3y^4) - (9x^2y - x^3y^4)$$

$$14) (4x^2y + 3y^4) + (4x^2y + y^4)$$

$$15) (3ab^4 + ab^2) + (10ab^2 + 3ab^4)$$

$$16) (2x^3y^3 + 6xy) - (5xy + 5x^3y^3)$$

$$17) (9 - 4mn^2) - (10mn^2 + 6)$$

$$18) (10x^2y + 10x^2y^4) - (6x^2y + 9x^2y^4)$$

$$19) (m^4n^3 - 10n^3) - (9n^4 + 3m^4n^3)$$

$$20) (7u^2v - 8v^4) + (4u^2v - 5v^4)$$

$$21) (3x^2y^3 - 6xy^3) + (10x^2y^3 + 8x^4)$$

$$22) (9v - 4uv^4) + (5v - 7)$$

$$23) (4x^3y^3 - 2x^4y^3) + (x^2y + 2x^4y^3)$$

$$24) (10ab + 3b^4) + (7ab - 2a^4b)$$

$$25) (9x^3y^4 - xy^2) + (6xy^2 + 6x^3y^4)$$

$$26) (5y^4 + 2x^3y^3) + (x - 5x^3y^3)$$

$$27) (10mn^2 + 2m^3) + (8m^2n^2 + 2m^3)$$

$$28) (7m^4 + 4m^3n) - (m^3n + 9m^4)$$

$$29) (6v^3 + 2u^4v^4) + (7v^3 - 10u^4v^4)$$

$$30) (5xy^2 + 8x^2) + (2xy^2 - 8x^2)$$

Answers to Polynomials - two variables - integers

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|---------------------------|-------------------------------|-------------------------------|----------------------|
| 1) $2y^4 + 18x^2y$ | 2) $8a^4b^2 - 11a^3b^2$ | 3) $5m^4n + 4n^3$ | 4) $16x^3y^4 + 9y^2$ |
| 5) $2x^4y^3 + 3x^2y^2$ | 6) $-6u^4v^4 - 16u^4v$ | 7) $14x^4y^3 + 11xy^3$ | 8) $12a^2b^3 + 4a^2$ |
| 9) $-18x^4y^2 + 7x^3y$ | 10) $-10mn^4 + 10m^3$ | 11) $13x^4y^3 - 14xy$ | 12) $2xy^3 - 5x^2$ |
| 13) $-x^3y^4 - 3x^2y$ | 14) $4y^4 + 8x^2y$ | 15) $6ab^4 + 11ab^2$ | 16) $-3x^3y^3 + xy$ |
| 17) $-14mn^2 + 3$ | 18) $x^2y^4 + 4x^2y$ | 19) $-2m^4n^3 - 9n^4 - 10n^3$ | |
| 20) $-13v^4 + 11u^2v$ | 21) $13x^2y^3 - 6xy^3 + 8x^4$ | 22) $-4uv^4 + 14v - 7$ | |
| 23) $4x^3y^3 + x^2y$ | 24) $-2a^4b + 3b^4 + 17ab$ | 25) $15x^3y^4 + 5xy^2$ | |
| 26) $-3x^3y^3 + 5y^4 + x$ | 27) $8m^2n^2 + 4m^3 + 10mn^2$ | 28) $-2m^4 + 3m^3n$ | |
| 29) $-8u^4v^4 + 13v^3$ | 30) $7xy^2$ | | |