

Polynomial Addition and Subtraction Problems

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Simplify each of the following problems. Write complete and correct steps for all problems. Do not use a calculator. Work the odd problems, if you have any trouble whatsoever also do the even problems. The last 10 problems are review problems.

(1) $3x + 2x$

(2) $7x + 3x$

(3) $6x - 5x$

(4) $9x - 6x$

(5) $11x - 5y - 2y - 18x + 7y - 3x$

(6) $-12y + 2x - 3y + 2y - 9x + 2y$

(7) $(5x) + (6x)$

(8) $(3x) + (7x)$

(9) $2a - 6a$

(10) $8b - 12b$

(11) $-11y - 2y$

(12) $-8z - 4z$

(13) $(5x) - (8x)$

(14) $(3y) - (2y)$

(15) $3z - (-6z)$

(16) $5x - (-2x)$

(17) $12x - 4 + 6x - 7$

(18) $8y - 7 - 2y + 11$

(19) $(2x + 1) - (3x - 1)$

(20) $(3x + 2) - (5x - 2)$

(21) $(-9x - 2) - (-5x - 6)$

(22) $(-11x - 5) - (-2x - 3)$

(23) $3x - 2 + (-5x - 2)$

(24) $5y - 1 + (8x - 1)$

(25) $5 - 2(2x - 1)$

(26) $3 - 2(5y + 1)$

(27) $5y^2 - 2y - 1 - 2y^2 - 3y + 8$

(28) $3x^2 + 2x - 3 + 4x^2 - 8x - 7$

(29) $(2a^2 - a + 2) - (-3a^2 - 4a + 3)$

(30) $(-6b^2 + 2b - 3) - (-5b^2 - 2b + 1)$

(31) $-11x^2y + 5xy^2$

(32) $-6ab^2 - 3a^2b$

(33) $3x^2y^2 - 8xy + 2xy - 8$

(34) $-3x^2y^2 + 2xy - 72xy + 2$

(35) $3ab^3 - 4a^2b - 9 + 4a^2b^2 - 3ba^2$

(36) $4x^3y + 3xy^2 - 3xy - 7y^2x - 7$

(37) $x - 0.2x$

(38) $y - 0.7y$

(39) $3.2a + 8 - 2.5a$

(40) $3 + 8.1b - 2.9b$

(41) $5 - 2(2x^2 - 5x + 1) - 4(-2x^2 + 4x - 1)$

(42) $1 + 5(8z^2 - 15z + 2) - 4(-z^2 - 3z + 6)$

(43) $2(3x - 2y) + 2(4x - xy) - 3(-2x - xy^2)$

(44) $-3(5a - 3b) - (-3a - ab^2) + 5(-8a + 4b)$

$$(45) \frac{2}{3}a - \frac{4}{5}a$$

$$(47) \frac{3z}{2} - \frac{1}{5}z$$

$$(46) \frac{1}{4}x + \frac{1}{7}x$$

$$(48) \frac{6a}{5} - \frac{2}{3}a$$

_____ The following are review problems. Work all of them. _____

$$(49) 11x - 5y - 17x - 5x - 8y + 14y - 7$$

$$(51) -(3a - b) - (-2a + 8) - (5 - 3a)$$

$$(53) 3x^2y^2 - 7xy + 2xy - 9$$

$$(55) 5 - 3(-2a - 3) + (5a - 1)$$

$$(57) 3x^2y - 4x^2y^2 - 3xy^2$$

$$(50) 3x - 2x^2 + 5x - 8x^2 + (3x)$$

$$(52) \frac{1}{2}a - \frac{2}{3}b + \frac{1}{5}a - b$$

$$(54) 23.4x + 12.1x - y + 0.5y$$

$$(56) 2x - (5x - 1) - 4x + 2 - 23x$$

$$(58) 3 - 2(-x + 2a) + 2(4y - 3a) - 3(2x - y + a)$$

Answers: (1) $5x$ (2) $10x$ (3) x (4) $3x$ (5) $-10x$ (6) $-11y - 7x$ (7) $11x$
(8) $10x$ (9) $-4a$ (10) $-4b$ (11) $-13y$ (12) $-12z$ (13) $-3x$ (14) y
(15) $9z$ (16) $7x$ (17) $18x - 11$ (18) $6y + 4$ (19) $-x + 2$ (20) $-2x + 4$
(21) $-4x + 4$ (22) $-9x - 2$ (23) $-2x - 4$ (24) $5y + 8x - 2$ (25) $-4x + 7$ (26) $-10y + 1$
(27) $3y^2 - 5y + 7$ (28) $7x^2 - 6x - 10$ (29) $5a^2 + 3a - 1$ (30) $-b^2 + 4b - 4$ (31) $5xy^2 - 11x^2y$
(32) $-6ab^2 - 3a^2b$ (33) $3x^2y^2 - 6xy - 8$ (34) $-3x^2y^2 - 70xy + 2$ (35) $3ab^3 + 4a^2b^2 - 7a^2b - 9$
(36) $-4xy^2 + 4x^3y - 3xy - 7$ (37) $0.8x$ (38) $0.3y$ (39) $0.7a + 8$ (40) $5.2b + 3$
(41) $4x^2 - 6x + 7$ (42) $44z^2 - 63z - 13$ (43) $3xy^2 - 2xy - 4y + 20x$ (44) $ab^2 + 29b - 52a$
(45) $\frac{-2a}{15}$ (46) $\frac{11x}{28}$ (47) $\frac{13z}{10}$ (48) $\frac{8a}{15}$ (49) $y - 11x - 7$ (50) $-10x^2 + 11x$
(51) $b + 2a - 13$ (52) $\frac{-5b}{3} + \frac{7a}{10}$ (53) $3x^2y^2 - 5xy - 9$ (54) $-0.5y + 35.5x$ (55) $11a + 13$
(56) $-30x + 3$ (57) $-4x^2y^2 - 3xy^2 + 3x^2y$ (58) $11y - 4x - 13a + 3$