



Adding and Subtracting Like Terms.

1 Simply each expression

a) $5x + 3x$ _____ b) $2y + 7y$ _____ c) $4m + 2m$ _____

d) $2n + 7n$ _____ e) $20x^2 - 14x^2$ _____ f) $5xy + 7xy$ _____

g) $8pq + 6pq$ _____ h) $9mn - 7mn$ _____ i) $7xy + 9xy$ _____

2 Simply

a) $5a + 2a + 3a$ _____ b) $10y - 3y + 2y$ _____ c) $5m^2 + 2m^2 + 4m^2$ _____

d) $7a + 3a + 2a + 6a$ _____ e) $6k + 3k - 2k + k$ _____ c) $7p - 4p - 2$ _____

3 Simply

a) $2x + 3y + 4x$ _____ b) $6m + 2n + 3m$ _____ c) $a + 8a + a$ _____

d) $3a + 2b + 4a + 2b$ _____ e) $8t + 4w - 6t + 2w$ _____ c) $9p + 3q - 7p + 2q$ _____

4 Simplifying these expressions may involve negative numbers

a) $10a - 3a$ _____ b) $3a - 10a$ _____

c) $12a - 7a$ _____ d) $8x - (-2x)$ _____

c) $6a - 7a$ _____ d) $-3x - (-2x)$ _____

5 Simplifying these expressions by collecting like terms

a) $5x + 2y - 4x$ _____ b) $9m + 4n - 5n$ _____

c) $-8p + 7pq - 2p$ _____ d) $5 - 2x^2 + x^2$ _____

6 Simplify

a) $2a + 4b + 8a + 2b$ _____ b) $7x + 3y - 3x + 4y$ _____

c) $9m - 2n + 7n + 2m$ _____ d) $9p - 7 + 6p - 5$ _____

e) $8a - 10 - 5a + 2$ _____ f) $12 - 6p - 5q + 3$ _____

g) $9k + 6n - 7k - 4n$ _____ h) $3m - 5m + 9k - 7k$ _____

i) $x + 7y - 5y + 2x$ _____ j) $10t + 2w - 11t - 6w$ _____

k) $5ab - 4bc + 2ab + 3bc$ _____ l) $6mn - 3m + 4mn - 5m$ _____

m) $6 - 4kl - 9 - 5kl$ _____ n) $7x^2 + 6x - 6x^2 - 9x$ _____

o) $9p - 6q^2 + 5q^2 - 7q$ _____ p) $7 + 4h - 10h - 16$ _____

7 Simplify the following

a) $5xy - 2yx$ _____ b) $4ab - 10ba + a$ _____

c) $-2mn + 8nm + 6$ _____ d) $10 - ab - 5ab$ _____

e) $5m^2 + 7m + 3 - 2m^2 - 5m$ _____ f) $6a^2 + 9a - 1 + 5a^2 - 10a$ _____

g) $2xy - 5yz + 3yx - 7yz$ _____ h) $2a^2 + 3ab + a^2 - 2ba$ _____

i) $6 + 2mn - 5 + m + 3nm$ _____ j) $9k^2 - 8kt + 7t^2 + 8tk$ _____

ANSWERS

1 Simply each expression

a) $5x + 3x = 8x$

b) $2y + 7y = 9y$

c) $4m + 2m = 6m$

d) $2n + 7n = 9n$

e) $20x^2 - 14x^2 = 6x^2$

f) $5xy + 7xy = 12xy$

g) $8pq + 6pq = 14pq$

h) $9mn - 7mn = 2mn$

i) $7xy + 9xy = 16xy$

2 Simply

a) $5a + 2a + 3a = 10a$

b) $10y - 3y + 2y = 9y$

c) $5m^2 + 2m^2 + 4m^2 = 11m^2$

d) $7a + 3a + 2a + 6a = 18a$

e) $6k + 3k - 2k + k = 8k$

c) $7p - 4p - 2 = 3p - 2$

3 Simply

a) $2x + 3y + 4x = 6x + 3y$

b) $6m + 2n + 3m = 9m + 2n$

c) $a + 8a + a = 10a$

d) $3a + 2b + 4a + 2b = 7a + 4b$

e) $8t + 4w - 6t + 2w = 2t + 6w$

c) $9p + 3q - 7p + 2q = 2p + 5q$

4 Simplifying these expressions may involve negative numbers

a) $10a - 3a = 7a$

b) $3a - 10a = -7a$

c) $12a - 7a = 5a$

d) $8x - (-2x) = 12x$

c) $6a - 7a = -a$

d) $-3x - (-2x) = -x$

5 Simplifying these expressions by collecting like terms

a) $5x + 2y - 4x = x + 2y$

b) $9m + 4n - 5n = 9m - n$

c) $-8p + 7pq - 2p = -10p + 7pq$

d) $5 - 2x^2 + x^2 = 5 - x^2$