

1. $10a - 5b - c - 17a - 6b + 9a - 7b - 12c + 8b$
 $= 10a - 17a + 9a - 5b - 6b - 7b + 8b - c - 12c$
 $= 2a - 10b - 13c$
2. $4ab - 6.2ac + 5bc - 9.3ab - 1.5ac - 4bc + 9.4ab$
 $= 4ab - 9.3ab + 9.4ab - 6.2ac - 1.5ac + 5bc - 4bc$
 $= 4.1ab - 7.7ac + bc$
3. $xyz - \frac{3}{2}xy - x - \frac{25}{3}xyz - 11 + \frac{7}{6}xy - x - xy + \frac{25}{3}xyz$
 $= xyz - \frac{25}{3}xyz + \frac{25}{3}xyz - \frac{3}{2}xy + \frac{7}{6}xy - xy - x - x - 11$
 $xyz - \frac{4}{3}xy - 2x - 11$
4. $(4m - 17) + (11m - 6) = 4m - 17 + 11m - 6 = 15m - 23$
5. $(2ef + e - 5f) - 9e - 6f + 3$
 $= 2ef + e - 5f - 9e - 6f + 3$
 $= 2ef - 8e - 11f + 3$
6. $-(a + b) = -a - b$
7. $-(x^3 + 4x^2 + 5x + 6) = -x^3 - 4x^2 - 5x - 6$
8. $a - (b + c) = a - b - c$
9. $5k - (k + 3) = 5k - k - 3 = 4k - 3$
10. $-n - (n^2 + 4n) = -n - n^2 - 4n = -n^2 - 5n$
11. $a - (b + c + d) = a - b - c - d$
12. $4x - 5y + 6z - (3x + 2y + 8z)$
 $= 4x - 5y + 6z - 3x - 2y - 8z$
 $= x - 7y - 2z$
13. $8x - 8y - 8z - (x - 2y + 3z)$
 $= 8x - 8y - 8z - x + 2y - 3z$
 $= 7x - 6y - 11z$
14. $a - 2b + 3c - 4d - (a - 2b + 3c - 4d)$
 $= a - 2b + 3c - 4d - a + 2b - 3c + 4d$
 $= 0$
15. $2v - (5w + 10) - 4w - (8v - 7) - 1 + (6v - 9w)$
 $= 2v - 5w - 10 - 4w - 8v + 7 - 1 + 6v - 9w$
 $= -18w - 4$

16. $-(-(3p + 8) + 6p) + 8$
 $= -(-3p - 8 + 6p) + 8$
 $= -(3p - 8) + 8$
 $= -3p + 8 + 8$
 $= -3p + 16$
17. $-(\frac{1}{10}x - (xy - \frac{5}{6}x - \frac{3}{2}y)) + xy - (\frac{1}{15}x - \frac{1}{4}y)$
 $= -(\frac{1}{10}x - xy + \frac{5}{6}x + \frac{3}{2}y) + xy - \frac{1}{15}x + \frac{1}{4}y$
 $= -\frac{1}{10}x + xy - \frac{5}{6}x - \frac{3}{2}y + xy - \frac{1}{15}x + \frac{1}{4}y$
 $= -\frac{3}{30}x + xy - \frac{25}{60}x - \frac{6}{4}y + xy - \frac{2}{30}x + \frac{1}{4}y$
 $= 2xy - \frac{30}{30}x - \frac{5}{4}y$
 $= 2xy - x - \frac{5}{4}y$
18. $a - (b - (c - (d - e)))$
 $= a - (b - (c - d + e))$
 $= a - (b - c + d - e)$
 $= a - b + c - d + e$
19. $1 - (2 - (3 - (4 - (5 - z))))$
 $= 1 - (2 - (3 - (4 - 5 + z)))$
 $= 1 - (2 - (3 - 4 + 5 - z))$
 $= 1 - (2 - 3 + 4 - 5 + z)$
 $= 1 - 2 + 3 - 4 + 5 - z$
 $= -z + 3$
20. $50k + 29 - (18k - (44 - (7k + 36))) - 13k$
 $= 50k + 29 - (18k - (44 - 7k - 36)) - 13k$
 $= 50k + 29 - (18k - 44 + 7k + 36) - 13k$
 $= 50k + 29 - 18k + 44 - 7k - 36 - 13k$
 $= 50k - 18k - 7k - 13k + 29 + 44 - 36$
 $= 12k + 37$
21. $45n^3 - (12n^2 + 3n - 1) - (45n^3 - (5n^2 + 10n - 1) - (-9n^2 + 16n + 3)) - 24n^2$
 $= 45n^3 - 12n^2 - 3n + 1 - (45n^3 - 5n^2 - 10n + 1 + 9n^2 - 16n - 3) - 24n^2$
 $= 45n^3 - 12n^2 - 3n + 1 - 45n^3 + 5n^2 + 10n - 1 - 9n^2 + 16n + 3 - 24n^2$
 $= 45n^3 - 45n^3 - 12n^2 + 5n^2 - 9n^2 - 24n^2 - 3n + 10n + 16n + 1 - 1 + 3$
 $= -40n^2 + 23n + 3$
22. $-(3p + 8) + 5p - (-6p + 2 - (9p - (p - 1) - 7) + 4p)$
 $= -3p - 8 + 5p - (-6p + 2 - (9p - p + 1 - 7) + 4p)$
 $= -3p - 8 + 5p - (-6p + 2 - 9p + p - 1 + 7 + 4p)$
 $= -3p - 8 + 5p + 6p - 2 + 9p - p + 1 - 7 - 4p$
 $= 12p - 16$

$$\begin{aligned}
23. \quad & 2a^3 - (4a - (4 - (6a^3 - 1) - a^2) - (3a^2 - 5) + 3a - (4a^3 - (2a^2 - 7a))) \\
& = 2a^3 - (4a - (4 - 6a^3 + 1 - a^2) - 3a^2 + 5 + 3a - (4a^3 - 2a^2 + 7a)) \\
& = 2a^3 - (4a - 4 + 6a^3 - 1 + a^2 - 3a^2 + 5 + 3a - 4a^3 + 2a^2 - 7a) \\
& = 2a^3 - 4a + 4 - 6a^3 + 1 - a^2 + 3a^2 - 5 - 3a + 4a^3 - 2a^2 + 7a \\
& = 2a^3 - 6a^3 + 4a^3 - a^2 + 3a^2 - 2a^2 - 4a - 3a + 7a + 4 + 1 - 5 \\
& = 0
\end{aligned}$$

$$\begin{aligned}
24. \quad & 20x^2 - (7xy - (3y^2 - (8x^2 + 11xy + 6y^2) - 12x^2) - 5y^2) - (9xy - 4y^2) \\
& = 20x^2 - (7xy - (3y^2 - 8x^2 - 11xy - 6y^2 - 12x^2) - 5y^2) - 9xy + 4y^2 \\
& = 20x^2 - (7xy - 3y^2 + 8x^2 + 11xy + 6y^2 + 12x^2 - 5y^2) - 9xy + 4y^2 \\
& = 20x^2 - 7xy + 3y^2 - 8x^2 - 11xy - 6y^2 - 12x^2 + 5y^2 - 9xy + 4y^2 \\
& = 20x^2 - 8x^2 - 12x^2 + 3y^2 - 6y^2 + 5y^2 + 4y^2 - 7xy - 11xy - 9xy \\
& = -27xy + 6y^2
\end{aligned}$$