

Algebra

A. Simplify the following expressions:

1. $5a + 3a$ 2. $6a - 4a$ 3. $4a + a$ 4. $x + x + x + x$

5. $a - a$ 6. $3a + 2a - 5a$ 7. $3a + 5c - a + 2c$

8. $3x + 2x + 3y - y$ 9. $3x - x + 3 - 2$

10. $3x + y - x + 4y$ 11. $3x + 2y - 3x + 4y$

12. $2x + 5y - 3y + x$ 13. $p + q - p - q$

14. $p + q + p + q + p$ 15. $4p - 5p$

B. Expand the brackets and simplify where possible.

1. $4(x - 3)$ 2. $4(2x - 3)$

3. $2(3 - 4y)$ 4. $x(x + 1)$

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

7. $y(x - y^2)$ 8. $4(p + 2) + 3(2p - 3)$

9. $2(3p + 2) + 3(2p - 3)$ 10. $3(2p - 5) + 2(3p - 3)$

11. $2p(p + 2) + 3p(2p - 3)$ 12. $3p(p - 2) + 2p(3p - 2)$

C. Solve the following equations:

1. $x + 3 = 9$ 2. $2x = 6$ 3. $4 - x = 5$

4. $2x + 3 = 13$ 5. $2x = 1$ 6. $3x = 2$

7. $4x = 20$ 8. $4x - 1 = 19$ 9. $4x = -20$

10. $2x = -6$ 11. $4x = -8$ 12. $4x = -1$

13. $2x + 3 = -5$ 14. $2x - 3 = 5$ 15. $2x - 3 = x + 2$