

Topics covered:

- Chapter 1 (Algebraic Expressions and Formulae)
- Chapter 2.1 & 2.2
 - Quadratic Equations by factorisation
 - Completing the square

1. (a) Make x the subject of the formula $y = a + \frac{3by}{2x}$
 (b) Hence, find the value of x when $a = 3$, $b = -2$ and $y = 4$

Answer: (a) _____

(b) $k =$ _____

2. Express $\frac{5}{x-y} - \frac{3}{y-x}$ as a single fraction in its simplest form.

Answer: _____

3. Solve the equation $\frac{6}{3c+1} - \frac{3}{2c-3} = 0$

Answer: $c =$ _____ or _____

4. Expand each of the following expressions.

(a) $(x + 3y)(2x + y + 5)$

(b) $(x - 3)(x^2 + 4x - 7)$

Answer: (a) _____

(b) _____

5. Factorise each of the following expressions completely.

(a) $6m + 9mn + 3pn + 2p$

(b) $5f(3 - 2x) - (2x - 3)$

Answer: (a) _____

(b) _____

6. Write $x^2 + 10x + 11$ in the form $(x + p)^2 + q$

Answer: _____

7. Solve $3x^2 + 10x + 7 = 0$ by factorisation.

Answer: $x =$ _____ or $x =$ _____

8. Express each of the following as a fraction in its simplest form.

(a) $\frac{2}{x-3} + \frac{3}{(x-3)^2}$

(b) $\frac{2}{(x-1)(x+2)} + \frac{3}{(x+2)(x-3)}$

(c) $\frac{4}{x^2-4} + \frac{1}{2-x}$

Answer: (a) _____

(b) _____

(c) _____