

1 Solve the inequality $\frac{4x-5}{7} > 2x+1$. [3]

2 Solve the inequality $3x^2 + 10x + 3 > 0$. [3]

3 Solve the inequality $5x^2 - 28x - 12 \leq 0$. [4]

4 Solve the following inequality.

$$\frac{2x+1}{5} < \frac{3x+4}{6} \quad [4]$$

5 Solve the inequality $6(x+3) > 2x+5$. [3]

6 Solve the inequality $5 - 2x < 0$. [2]

7 Solve the following inequalities.

(i) $2(1-x) > 6x+5$ [3]

(ii) $(2x-1)(x+4) < 0$ [2]

8 Solve the inequality $\frac{5x-3}{2} < x+5$. [3]

9 Solve the inequality $x(x-6) > 0$. [2]

10 Solve the inequality $7-x < 5x-2$. [3]

11 Solve the inequality $3x-1 > 5-x$. [2]

12 Solve the inequality $1-2x < 4+3x$. [3]

13 Solve the inequality $x^2+2x < 3$. [4]

14 Solve the inequality $\frac{3(2x+1)}{4} > -6$. [4]

15 (i) Write x^2-5x+8 in the form $(x-a)^2+b$ and hence show that $x^2-5x+8 > 0$ for all values of x . [4]

(ii) Sketch the graph of $y = x^2 - 5x + 8$, showing the coordinates of the turning point. [3]

(iii) Find the set of values of x for which $x^2 - 5x + 8 > 14$. [3]

(iv) If $f(x) = x^2 - 5x + 8$, does the graph of $y = f(x) - 10$ cross the x -axis? Show how you decide. [2]