INEQUALITIES
SOLVING (EXAM-LEVEL QUESTIONS)

Ref: G270. **1R1**

A1 Solve $x + 5 > 11$	**A2** Solve $4x + 11 \leq 29$	**A3** Solve $7 - x \geq 15$	**A4** Work out the integer values of x that satisfy both the inequalities $3x - 4 \leq 11$ and $2x + 3 > 9$
B1 Solve $\dfrac{2x + 5}{3} > 7$	**B2** Solve $6x + 3 \leq 2x + 19$	**B3** Solve $3x + 9 < 4x + 5$	**B4** Work out the lowest integer which satisfies the inequality $5x - 2 \geq 3x + 7$
C1 List the integer values for x if: $-3 \leq x < 4$	**C2** List the integer values for x if: $-5 \leq 5x \leq 15$	**C3** List the integer values for x if: $4 \leq 3x + 1 < 12$	**C4** List the integer values for x if: $2x < 3x + 1 < 13$
D1 Solve $x^2 - 7 < 42$	**D2** Solve $3x^2 - 17 < 31$	**D3** Solve $5x^2 - 13 \leq 32$	**D4** List the integer values for x if: $2x + 3 < 4x + 5 \leq 3x + 7$

Worksheets, Videos, Interactive Quizzes and Exam Solutions

INEQUALITIES
SOLVING (EXAM-LEVEL QUESTIONS)

Ref: G270. **1R1**

A1 Solve $x + 5 > 11$ $x + 5 > 11$ $x > 6$	**A2** Solve $4x + 11 \leq 29$ $4x + 11 \leq 29$ $4x \leq 18$ $x \leq 4.5$	**A3** Solve $7 - x \geq 15$ $7 - x \geq 15$ $-x \geq 8$ $x \leq -8$	**A4** $3x - 4 \leq 11 \quad 2x + 3 > 9$ $3x \leq 15 \quad 2x > 6$ $x \leq 5 \quad x > 3$ 4 and 5
B1 Solve $\dfrac{2x+5}{3} > 7 \Rightarrow 2x + 5 > 21$ $2x > 16$ $x > 8$	**B2** Solve $6x + 3 \leq 2x + 19$ $6x - 2x \leq 19 - 3$ $4x \leq 16$ $x \leq 4$	**B3** Solve $3x + 9 < 4x + 5$ $3x - 4x < 5 - 9$ $-x < -4$ $x > 4$	**B4** $5x - 3x > 7 + 2$ $2x > 9$ $x > 4.5$ $\therefore$ Lowest integer is 4
C1 List the integer values for x if: $-3 \leq x < 4$ $-3, -2, -1, 0, 1, 2, 3$	**C2** List the integer values for x if: $-5 \leq 5x \leq 15$ $-1 \leq x \leq 3$ $-1, 0, 1, 2, 3$	**C3** List the integer values for x if: $3 \leq 3x < 11$ $1 \leq x \leq \dfrac{11}{3}$ $1, 2, 3$	**C4** List the integer values for x if: $2x < 3x + 1 \quad 3x + 1 < 13$ $-1 < x \quad x < 4$ $0, 1, 2, 3$
D1 Solve $x^2 - 7 < 42$ $x^2 < 49$ $x < 7 \text{ and } x > -7$ $-7 < x < 7$	**D2** Solve $3x^2 - 17 < 31$ $3x^2 < 48$ $x^2 < 16$ $x < 4 \text{ and } x > -4$ $-4 < x < 4$	**D3** Solve $5x^2 - 13 \leq 32$ $5x^2 \leq 45$ $x^2 \leq 9$ $x \leq 3 \text{ and } x \geq -3$ $-3 \leq x \leq 3$	**D4** List the integer values for x if: $2x + 3 < 4x + 5 \leq 3x + 7$ *The working out is complex. There is not enough space here!* $0, 1, 2$