Edexcel Maths C1

Topic Questions from Papers

Inequalities
6. Find the set of values of $x$ for which

(a) $3(2x + 1) > 5 - 2x$,

(b) $2x^2 - 7x + 3 > 0$,

(c) both $3(2x + 1) > 5 - 2x$ and $2x^2 - 7x + 3 > 0$.
2. Find the set of values of $x$ for which
\[ x^2 - 7x - 18 > 0. \]

(Total 4 marks)
4. Find the set of values of $x$ for which

(a) $4x - 3 > 7 - x$  

(b) $2x^2 - 5x - 12 < 0$  

(c) both $4x - 3 > 7 - x$ and $2x^2 - 5x - 12 < 0$
3. Find the set of values of $x$ for which

(a) $3(x - 2) < 8 - 2x$ \hspace{1cm} (2)

(b) $(2x - 7)(1 + x) < 0$ \hspace{1cm} (3)

(c) both $3(x - 2) < 8 - 2x$ and $(2x - 7)(1 + x) < 0$ \hspace{1cm} (1)
3. Find the set of values of $x$ for which

(a) $4x - 5 > 15 - x$  

(b) $x(x - 4) > 12$
8. A rectangular room has a width of $x$ m.

The length of the room is 4 m longer than its width.

Given that the perimeter of the room is greater than 19.2 m,

(a) show that $x > 2.8$ (3)

Given also that the area of the room is less than 21 m$^2$,

(b) (i) write down an inequality, in terms of $x$, for the area of the room.

(ii) Solve this inequality. (4)

(c) Hence find the range of possible values for $x$. (1)
Question 8 continued
5. Find the set of values of \( x \) for which

(a) \( 2(3x + 4) > 1 - x \) 

(b) \( 3x^2 + 8x - 3 < 0 \)