

DO NOT WRITE IN THIS AREA

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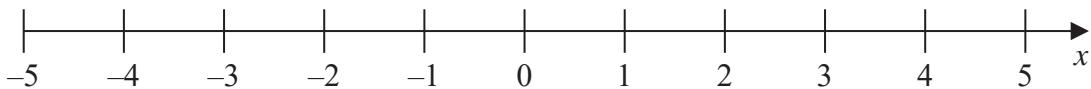
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- 22** (a) Find the set of values of x for which

$$x - 8 < 4 + 5x \leqslant 10 + 2x$$

(3)

- (b) Represent your solution set on the number line.



(2)

(Total for Question 22 is 5 marks)

- 23** A curve C has the equation $y = 3x^3 - 15x^2$

- (a) Find $\frac{dy}{dx}$

$$\frac{dy}{dx} = \dots$$

(2)

The tangent to the curve C at the point A has gradient -25

- (b) Find the x coordinate of the point A .

$$x = \dots$$

(4)

(Total for Question 23 is 6 marks)

P 5 3 3 0 5 A 0 1 3 2 0