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.
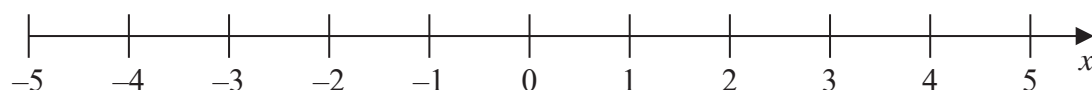
(2)

(Total for Question 22 is 5 marks)

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

(a) Find $\dfrac{dy}{dx}$

$\dfrac{dy}{dx} =$ ....

(2)

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

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

$x =$ ....

(4)

(Total for Question 23 is 6 marks)