

22 A curve has equation $y = x^n + qx^2 + 9x$.

$$\frac{dy}{dx} = 3x^2 - 12x + 9$$

(a) Find the value of n , and the value of q .

$$n = \dots\dots\dots q = \dots\dots\dots [2]$$

(b) Work out the coordinates of the turning points of the curve.

$$(\dots\dots\dots, \dots\dots\dots) \text{ and } (\dots\dots\dots, \dots\dots\dots) [4]$$