9 A curve is such that $\dfrac{dy}{dx} = \dfrac{4}{\sqrt{(6-2x)}}$, and $P(1, 8)$ is a point on the curve.

    (i) The normal to the curve at the point P meets the coordinate axes at Q and at R. Find the coordinates of the mid-point of QR. [5]

    (ii) Find the equation of the curve. [4]