7 A curve C in the x-y plane has the property that the gradient of the tangent at the point $P(x, y)$ is three times the gradient of the line joining the point $(3, 2)$ to P.

(a) Express this property in the form of a differential equation. [2]

It is given that C passes through the point $(4, 3)$ and that $x > 3$ and $y > 2$ at all points on C.

(b) Determine the equation of C giving your answer in the form $y = \mathrm{f}(x)$. [4]

The curve C may be obtained by a transformation of part of the curve $y = x^3$.

(c) Describe fully this transformation. [2]