

3. Given that

$$\frac{d}{dx}(u\sqrt{x}) = \frac{du}{dx} \times \frac{d(\sqrt{x})}{dx}, \quad 0 < x < \frac{1}{2},$$

where u is a function of x , and that $u = 4$ when $x = \frac{3}{8}$, find u in terms of x .

(9)