

7.

In this question you must show all stages of your working.

$$f(x) = \frac{2(x-5)^2}{\sqrt{x}} \quad x > 0$$

- (a) Write $f(x)$ in the form $Ax^m + Bx^n + Cx^p$ where A , B , C , m , n and p are simplified constants.

(3)

- (b) Hence find $\int f(x) dx$ writing the answer in simplest form.

(3)

- (c) (i) Show that when $f'(x) = 0$

$$3x^2 - 10x - 25 = 0$$

- (ii) Hence find the x coordinate of the stationary point on the curve with equation $y = f(x)$.

(4)