Show that

 $\int_0^2 \frac{x}{(2x+1)^3} \, \mathrm{d}x = \frac{2}{25}$ 

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

$$\int_0^{\pi} \frac{x}{(2x+1)^3} \, \mathrm{d}x = \frac{2}{25}$$

$$\int_0^{\infty} \frac{dx}{(2x+1)^3} \, dx = \frac{1}{25}$$