

1. Evaluate the definite integral

(a)  $\int_{-8}^8 x^{\frac{1}{3}} dx$

(b)  $\int_{\frac{\pi}{4}}^{\frac{\pi}{2}} (2 - \csc^2 x) dx$

(c)  $\int_{-1}^0 x\sqrt{1-x^2} dx$

(d)  $\int \frac{6x^2}{(4x^3 - 9)^3} dx$