

Section 3.3 - Trigonometric Substitution

Evaluate the integrals.

(i) $\int \frac{dx}{\sqrt{x^2 - 16}}$

(ii) $\int_0^{\frac{3\sqrt{3}}{2}} \frac{x^3}{(4x^2 + 9)^{3/2}} dx$

$$(iii) \int \frac{x}{\sqrt{3-2x-x^2}} dx$$

$$(iv) \int_{\sqrt{2}/3}^{2/3} \frac{dx}{x^5 \sqrt{9x^2-1}}$$