

Integrals of Different Types by Partial Fraction

SUBJECT : MATHEMATICS
CHAPTER NUMBER:7
CHAPTER NAME :INTEGRALS

CHANGING YOUR TOMORROW

Example

Evaluate the Integral

$$\int \frac{dx}{3 + 2x - x^2}, x < 3$$

Example

Evaluate the Integral

$$\int \frac{2x - 3}{(x^2 - 1)(2x + 3)} dx$$

Example

Evaluate the Integral

$$\int \frac{3x - 5}{(3x - 2)(x + 1)^2} dx$$

Example

Evaluate the Integral

$$\int \frac{dx}{(x-1)(x^2+1)}$$

Example

Evaluate the Integral

$$\int \frac{x^4}{(x-1)(x^2+1)} dx$$

Assignments

1. Evaluate the integrals

$$(a) \int \frac{x^3}{(x-1)(x-2)} dx$$

$$(b) \int \frac{x^2+1}{(x-1)^2(x+3)} dx$$

$$(c) \int \frac{2x}{(x^2+1)(x^2+2)} dx$$

$$(d) \int \frac{8}{(x+2)(x^2+4)} dx$$

$$(e) \int \frac{1}{\sin x(3+2\cos x)} dx$$

$$(f) \int \frac{1}{x(x^4-1)} dx$$

2. Exercise 7.5 from NCERT book.

THANKING YOU
ODM EDUCATIONAL GROUP