



Al-Mustaqbal University
College of Science
Forensic Evidence Department
Second Stage



جامعة المستقبل
AL MUSTAQBAL UNIVERSITY

كلية العلوم
قسم الادلة الجنائية

Lecture (9)

TUTORIAL OF INTEGRAL

المادة : Complex Analysis

المرحلة : الثانية

اسم الاستاذ: م.م ريام ثائر احمد



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تخصيص

Complex Analysis
الأدلة الجنائية (المرحلة الثانية)



إعلان للمف



رمز الفصل الدراسي

 vsp2rq1b



vsp2rq1b

<https://classroom.google.com/c/ODE1MDM4MzAxMzU0?cjc=vsp2rq1b>



1. Find the indefinite integral of the following functions with respect to x .

(a) x^7

(d) $x^2 - 2$

(g) $2x^{-3}$

(j) $x^{0.2}$

(b) 4

(e) $2x^3 - 3x^2$

(h) $\sqrt{x}$

(k) $\sqrt{x^3}$

(c) $9x^8$

(f) $x^{1/3}$

(i) ax^{10}

(l) $x + x^{-1/2}$

2. Find:

(a) $\int (4x^2 - 2x)dx$

(e) $\int (3x^2 - 2x + 1)dx$

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

(b) $\int (2x^4 - 3x^3)dx$

(f) $\int (x^5 - 4x^3 + x^2 - x + 1)dx$

(j) $\int \left(3x^2 + \frac{2}{x^3}\right) dx$

(c) $\int (x^2 - x^{-2})dx$

(g) $\int (x - 1)(x + 1)dx$

(k) $\int (x^{3/2} + x^{-3/2})dx$

(d) $\int (2x + 1)^2 dx$

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

(i) $\int 2du$



Answers:

1. (a) $\frac{x^8}{8} + C$	(d) $\frac{x^3}{3} - 2x + C$	(g) $-x^{-2} + C$	(j) $\frac{x^{1.2}}{1.2} + C$
(b) $4x + C$	(e) $\frac{x^4}{2} - x^3 + C$	(h) $\frac{2}{3}x^{3/2} + C$	(k) $\frac{2}{5}x^{5/2} + C$
(c) $x^9 + C$	(f) $\frac{3}{4}x^{4/3} + C$	(i) $\frac{ax^{11}}{11} + C$	(l) $\frac{x^2}{2} + 2x^{1/2} + C$

2. (a) $\frac{4x^3}{3} - x^2 + C$	(e) $x^3 - x^2 + x + C$	(i) $\frac{2}{7}x^{7/2} + C$
(b) $\frac{2x^5}{5} + \frac{3x^4}{4} + C$	(f) $\frac{x^6}{6} - x^4 + \frac{x^3}{3} + \frac{x^2}{2} + x + C$	(j) $x^3 - \frac{1}{x^2} + C$
(c) $\frac{x^3}{3} + x^{-1} + C$	(g) $\frac{x^3}{3} - x + C$	(k) $\frac{2}{5}x^{5/2} - 2x^{-1/2} + C$
(d) $\frac{4x^3}{3} + 2x^2 + x + C$	(h) $\frac{x^3}{3} + x^2 + x + C$	(i) $2u + C$