INTEGRAL WITH SUBSTITUTION TO RATIONALIZE

I. SUBSTITUTE WITH ALGEBRA FUNCTION

 integral symbol

 f(x)dx

 f(x) = integran

* 1. INTEGRAN with Form : 

Solution : Substitute u = 

Examples :

1. Solve 

Subst : u u2 = x  2u du = dx



= 2 1n 

= 2 1n 

1. Solve : 

Subst : u  u3 = x – 4  x = u3 + 4

 3u2 du = dx

 = 

 = 

 = 3 ( 1/7 u7 + u4 ) + C

 = 3/7 (x – 4)7/3 + C

1. Solve : 

Subst : u  u5 = x + 1  x = u5 – 1

 5u4 du = dx



= 5 

= 5 (1/12 u12 – 1/7 u7) + C

= 

= 

B. INTEGRAN with Form: 

Solution : Substitusi u = 

Examples :

1). Solve : 

Subst : u = u2 2 + x3  x3 = u2 – 2

2u du = 3x2 dx

x2 dx = 2/3 u du

 

= 

= 

= 

= 

EXAMINATION

1. 

2. 

3. 

4. 