**Integration by successive reduction**

**1Exam:** Find the reduction formula for hence find

Soln. =

= =

2nd part

= 

= () =

= ()

=

=

**2Example:** Find the reduction formula for hence find

Soln.

=

=

=

=

2nd

=

=

**3Example:** Find the reduction formula for hence find

Soln:

=

2nd part

**4Example:** Find the reduction formula for



=

=

**5Example:** Find the reduction formula for

Soln:

**6Example:** Find the reduction formula for

and hence evaluate

Soln:

Changing *n* to *n-1* 0n both sides ,

2nd part

**7Example:** Find the reduction formula for

Soln:

**8Example:** Find the reduction formula for

hence find

Soln

=>

2nd part



**9Example:** Find the reduction formula for

, m, n positive integer is

or

hence find

Soln

Similarly

2nd part