**TRIGONOMETRIC INTEGRAL**

Formula of Trigonometry Integral:

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 

9. 

10. 

Examples :

1. 

= 

= 1n

1. 

= 

= - 1n

= 1n

= 1n

1. 
2.  subst : u = x2 du = 2x dx

x.dx = ½ du

 

 = 

 = ½ tg u + C

 = ½ tg ( x2 ) + C

1. **Form and **
* n odd number 🡪 split one sin x or cos x

Use formula = $\left\{\begin{matrix}sin^{2}x=1-cos^{2}x\\cos^{2}x=1-sin^{2}x\end{matrix}\right.$

* n even number

 Use formula = $\left\{\begin{matrix}sin^{2}x=1/2( 1-\cos(2x))\\cos^{2}x=1/2(1+\cos(2x))\end{matrix}\right.$

Examples :

1. 

 = ½ (x - ½ sin 2x) + C

 = ½ x – ¼ sin 2x + C

1. 

=  u = cos x 🡪 du= – sin x dx

= 

= - (u – 1/3 u3) + C

= - cos x + 1/3 cos3x + C

1. 

 = ½ (x + ½ sin 2x) + C

 = ½ x + ¼ sin 2x + C

1. 

=  u = sin x 🡪 du= cos x dx

=  = 

= u – 2/3 u3+1/5 u5 + C

= sin x – 2/3 sin3x + 1/5 sin5x + C

**REDUCTION FORMULA**

1. 
2. 
3. 
4. 
5. 
6. 