Nama : **Eko Saputra**
NIM : **201420001**
Fakultas : **Ilmu Komputer**
Prodi : **Teknik Informatika**

5 SOAL MENGEENAI INTERGRAL TAK TENTU

1. $\int 2x^3\,dx$

$$\int ax^n\,dx=\frac{a}{n+1}x^{n1}+c\;;n\neq 1$$

$$\int 2x^3\,dx=\frac{2}{3+1}x^3+1\,x+c=\frac{1}{2}x^{4x}+c$$

2. $\int 7\,dx$

$$\int k\,dx=kx+c$$

$$\int 7\,dx=7+c$$

3. $\int 8x^3-3x^2+x+5\,dx$

$$\int 8x^3-3x^2+x+5\,dx$$

$$\frac{8x^4}{4}-\frac{3x^3}{3}+\frac{x^2}{2}+c$$

$$2x^4-x^3+\frac{1}{2}x^2+5x+c$$

4. $\int (2x+1)(x-5)dx$

$$\int (2x+1)(x-5)\,dx$$

$$\int 2x^2+9x-5+c=\frac{2}{3}x^3+\frac{9}{2}x^2-5x+c$$

5. $\int x(2x-1)^2\,dx$

$$\int x(2x-1)^2\,dx$$
$$\int x(4x^2-4x+1)dx$$
$$\int (4x^3-4x^2+x)\,dx$$
$$x^4-\frac{4}{3}x^3+\frac{1}{2}x^2$$

5 SOAL UNTUK INTEGRAL TERTENTU.

1. $\int_1^2 5\,dx$

$$\int_1^2 5\,dx=(\frac{5}{0+1}x^2+1)$$
$$\int_1^2 5\,dx=5x$$
$$5(2)-5(1)=5$$

2. $\int_2^5 (3x^2-6x)\,dx=....?$

$$\int_2^5 (3x^2-6x)\,dx=(x^3-3x^2)$$
$$(5^3-3.5^2)-(2^3-3.2^2)$$
$$(125-75)-(8-12)$$
$$(50)-(-4)=54$$

3. $\int_{-1}^2 (4x-6x^2)\,dx=...?$

$$\int_{-1}^2 (4x-6x^2)dx=(2x^2-2x^3)$$
$$(2.2^2-2.2^3)-(2.(-1)^2-2.(-1)^3)$$
$$(8-16)-(2+3)$$
$$(-8)-(5)=-13$$

4. $\int_0^{n/2} \sin x \, dx = ...?$

$$\int_0^{n/2} \sin x \, dx = -\cos x$$
$$-(\cos n/2 - \cos 0)$$
$$-(0-1)$$
$$-(-1) = 1$$