

L K P D

MATEMATIKA

Tujuan Pembelajaran:

Peserta didik dapat menentukan nilai tertentu fungsi aljabar dengan tepat

NAMA :

SMK SOSIAL ISLAM 1
PRAMBANAN

Jawablah Soal Berikut

1

$$\begin{aligned}
 & \int_2^3 4x^3 + 6x^2 dx \\
 &= \left[\frac{4}{4+1} x^{4+1} + \frac{6}{2+1} x^{2+1} \right]_2^3 \\
 &= \left[\frac{4}{5} x^5 + \frac{6}{3} x^3 \right]_2^3 \\
 &= \left[\dots x^{\dots} + \dots x^{\dots} \right]_2^3 \\
 &= (\dots \cdot 3^{\dots} + \dots \cdot 3^{\dots}) - (\dots \cdot 2^{\dots} + \dots \cdot 2^{\dots}) \\
 &= (\dots + \dots) - (\dots + \dots) \\
 &= \dots - \dots \\
 &= \dots
 \end{aligned}$$

2

$$\begin{aligned}
 & \int_1^2 4(2x + 1) dx \\
 &= \int_1^2 4 \cdot 2x + 4 \cdot 1 dx \\
 &= \int_1^2 \dots x + 4 dx \\
 &= \left[\frac{\dots}{\dots+1} x^{\dots+1} + \frac{4}{1+1} x \right]_1^2 \\
 &= \left[\frac{\dots}{\dots} x^{\dots} + \frac{4}{2} x \right]_1^2 \\
 &= \left[\dots x^{\dots} + \dots x \right]_1^2 \\
 &= (\dots \cdot 2^{\dots} + \dots \cdot 2^{\dots}) - (\dots \cdot 1^{\dots} + \dots \cdot 1) \\
 &= (\dots + \dots) - (\dots + \dots) \\
 &= \dots - \dots \\
 &= \dots
 \end{aligned}$$

Jawablah Soal Berikut

3

$$\int_1^2 x\sqrt{x} \, dx$$

$$= \int_1^2 x^{\frac{3}{2}} \, dx$$

$$= \left[\frac{1}{\frac{3}{2}+1} x^{\frac{3}{2}+1} \right]_1^2$$

$$= \left[\frac{1}{\frac{5}{2}} x^{\frac{5}{2}} \right]_1^2$$

$$= \left[\frac{2}{5} x^{\frac{5}{2}} \right]_1^2$$

$$= \frac{2}{5} 2^{\frac{5}{2}} - \frac{2}{5} 1^{\frac{5}{2}}$$

$$= \frac{2}{5} 2\sqrt{2} - \frac{2}{5}$$

$$= \frac{2\sqrt{2}-1}{5}$$

4

$$\int_0^2 (2x+2)(x+5) \, dx$$

$$= \int_0^2 2x^2 + \dots x + 10 \, dx$$

$$= \left[\frac{2}{\frac{2}{2}+1} x^{\frac{2}{2}+1} + \frac{\dots}{\frac{1}{2}+1} x^{\frac{1}{2}+1} + 10x \right]_0^2$$

$$= \left[\frac{2}{3} x^3 + \dots x^{\frac{3}{2}} + 10x \right]_0^2$$

$$= \left(\frac{2}{3} 2^3 + \dots 2^{\frac{3}{2}} + 10 \cdot 2 \right) - \left(\frac{2}{3} 0^3 + \dots 0^{\frac{3}{2}} + 10 \cdot 0 \right)$$

$$= \left(\frac{2}{3} \cdot \dots + \dots \cdot \dots + \dots \right) - 0$$

$$= \frac{\dots}{\dots} + \dots + \dots$$

$$= \frac{\dots}{\dots} + \dots$$

$$= \frac{\dots}{\dots} + \frac{\dots}{\dots}$$

$$= \frac{\dots}{\dots}$$