

Lembar Kerja Peserta Didik

Nama Anggota:

1.
2.
3.
4.
5.

Mata Pelajaran : Matematika

Kelas : XI

Semester : Genap

Materi : Integral tak tentu

Kanan

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

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

$$\begin{aligned}
3. &= \int_{-2}^2 4x(x^2 + 5)dx \\
&= \int_{-2}^2 4x^3 + 4 \cdot 5 dx \\
&= \int_{-2}^2 4x^3 + \dots dx \\
&= \frac{4}{\dots + \dots} x^{\dots + \dots} + \frac{\dots}{\dots + \dots} x \Big]_{-2}^2 \\
&= \frac{\dots}{\dots} x^{\dots} + \frac{\dots}{\dots} x \Big]_{-2}^2 \\
&= \dots x^{\dots} + \dots x \Big]_{-2}^2 \\
&= (\dots \cdot 2 + \dots \cdot 2^{\dots}) - (\dots \cdot (-2) + \dots \cdot (-2)) \\
&= (\dots + \dots) - (\dots + \dots) \\
&= \dots - \dots \\
&= \dots
\end{aligned}$$

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$$\begin{aligned}
 1. \quad & \int_1^2 x\sqrt{x} \, dx \\
 &= \int_1^2 x^{\frac{3}{2}} \, dx \\
 &= \left[\frac{1}{\frac{3}{2}+1} x^{\frac{3}{2}+1} \right]_1^2 \\
 &= \left[\frac{1}{\frac{5}{2}} x^{\frac{5}{2}} \right]_1^2 \\
 &= \left[\frac{2}{5} x^{\frac{5}{2}} \right]_1^2 \\
 &= \frac{2}{5} 2^{\frac{5}{2}} - \frac{2}{5} 1^{\frac{5}{2}} \\
 &= \frac{2}{5} 2 \cdot \sqrt{2} - \frac{2}{5} \\
 &= \frac{4\sqrt{2}-2}{5}
 \end{aligned}$$

$$\begin{aligned}
 2. \quad & \int_{-2}^2 x(3x-6) \, dx \\
 &= \int_{-2}^2 3x^2 - 6x \, dx \\
 &= \left[\frac{3}{3} x^3 - \frac{6}{2} x^2 \right]_{-2}^2 \\
 &= \left[x^3 - 3x^2 \right]_{-2}^2 \\
 &= (2^3 - 3 \cdot 2^2) - ((-2)^3 - 3 \cdot (-2)^2) \\
 &= (8 - 12) - (-8 - 12) \\
 &= -4 - (-20) \\
 &= 16
 \end{aligned}$$

$$\begin{aligned}
3. \quad & \int_0^2 (2x + 2)(x + 5) \, dx \\
&= \int_0^2 2x^2 + \dots x + 10 \, dx \\
&= \left[\frac{2}{\dots + \dots} x^{\dots + \dots} + \frac{\dots}{\dots + \dots} x^{\dots + \dots} + 10x \right]_0^2 \\
&= \left[\frac{2}{\dots} x^{\dots} + \dots x^{\dots} + 10x \right]_0^2 \\
&= \left(\frac{2}{\dots} 2^{\dots} + \dots 2^{\dots} + 10 \cdot 2 \right) - \left(\frac{2}{\dots} 0^{\dots} + \dots 0^{\dots} + 10 \cdot 0 \right) \\
&= \left(\frac{2}{\dots} \cdot \dots + \dots \cdot \dots + \dots \right) - 0 \\
&= \frac{\dots}{\dots} + \dots + \dots \\
&= \frac{\dots}{\dots} + \dots \\
&= \frac{\dots}{\dots} + \frac{\dots}{\dots} \\
&= \frac{\dots}{\dots}
\end{aligned}$$