

LEMBAR KERJA PESERTA DIDIK (LKPD) TURUNAN FUNGSI

Pertemuan ke 2 : Menemukan sifat-sifat turunan fungsi dan menentukan turunan fungsi aljabar

Kelas :

Kelompok ke :

Ketua Kelompok:

Anggota 1.

2.

3.

4.

5.

Tentukan Turunan Fungsi dari fungsi berikut.

1. $f(x) = x^2 + 3x - 15$

$$f'(x) = \frac{dy}{dx} = (\boxed{})x^{\boxed{}} + (\boxed{})3x^{\boxed{}} - \boxed{}$$
$$= \boxed{} x^{\boxed{}} + \boxed{} x^{\boxed{}}$$

$$f'(x) = \frac{dy}{dx} = \boxed{}$$

2. $g(x) = (x + 2)(x^2 - 4)$

Misal

$u(x) = x + 2$ maka $u'(x) = \boxed{}$

$v(x) = x^2 - 4$ maka $v'(x) = \boxed{}$

$$\begin{aligned}
 g'(x) &= u'(x) \cdot v(x) + u(x) \cdot v'(x) \\
 &= (\boxed{})(x^2 - 4) + (x + 2)(\boxed{}) \\
 &= (\boxed{}) + (\boxed{}) \\
 g'(x) &= \boxed{}
 \end{aligned}$$

3. $h(x) = \frac{1 - x^2}{2x + 5}$

Misal

$$\begin{aligned}
 u(x) &= 1 - x^2 \quad \text{maka} \quad u'(x) = \boxed{} \\
 v(x) &= 2x + 5 \quad \text{maka} \quad v'(x) = \boxed{}
 \end{aligned}$$

$$\begin{aligned}
 h'(x) &= \frac{u'(x) \cdot v(x) - u(x) \cdot v'(x)}{[v(x)]^2} \\
 &= \frac{(\boxed{})(2x + 5) - (1 - x^2)(\boxed{})}{[\boxed{}]^2} \\
 &= \frac{(\boxed{}) - (\boxed{})}{(\boxed{})} \\
 h'(x) &= \frac{(\boxed{})}{(\boxed{})}
 \end{aligned}$$

4. $k(x) = (3x^2 - 2)^2$

Misal

$$u(x) = 3x^2 - 2 \quad \text{maka} \quad u'(x) = \boxed{}$$

$$\begin{aligned}
 k'(x) &= \boxed{}(3x^2 - 2)^{\boxed{}} \cdot \boxed{} \\
 &= \boxed{} \cdot \boxed{} \\
 k'(x) &= \boxed{}
 \end{aligned}$$