

## TURUNAN FUNGSI

Nama :

Kelas :

No. Absen :

1.  $f(x) = -3x^5$  tentukan  $f'(x) = ?$

Jawab:

$$f(x) = -3x^5 \quad \text{maka} \quad f'(x) = -3(\dots) x^{5-\dots}$$

$$f'(x) = \dots x^{\dots}$$

2.  $f(x) = \frac{4}{x^3}$  tentukan  $f'(x) = ?$

Jawab:

$$f(x) = \frac{4}{x^3} = 4x^{-\dots}$$

$$\text{maka} \quad f'(x) = 4(\dots)x^{\dots-\dots} = \dots x^{-\dots} = \frac{-12}{x^{\dots}}$$

3.  $f(x) = 2x^3 + 3x^2 - 3x + 10$  tentukan  $f'(x) = ?$

Jawab:

$$f(x) = 2x^3 + 3x^2 - 3x + 10 \quad \text{maka:}$$

$$f'(x) = 2(\dots) x^{3-\dots} + 3(\dots) x^{2-\dots} - 3(\dots) x^{1-\dots}$$

$$f'(x) = \dots x^{\dots} + \dots x - \dots$$

4.  $f(x) = (3x^2 - 6x)(x + 2)$  tentukan  $f'(x) = ?$

Jawab :

Misal:

$u = 3x^2 - 6x$  maka  $u' = 3(\dots)x^{2-\dots} - \dots = \dots x - \dots$

$v = x + 2$  maka  $v' = \dots$

maka :

$f'(x) = u'v + uv'$

$f'(x) = (\dots x - \dots)(x + 2) + (3x^2 - 6x) \dots$   
 $= 6x^2 + 12x - \dots x - \dots + 3x^2 - 6x$   
 $= 9x^2 - \dots$

5.  $f(x) = \frac{3x}{6x+2}$  tentukan  $f'(x) = ?$

Jawab:

Misal:

$u = 3x$  maka  $u' = \dots$

$v = 6x + 2$  maka  $v' = \dots$

maka :

$f'(x) = \frac{u'v - uv'}{v^2}$  maka

$f'(x) = \frac{\dots(6x+2) - 3x \dots}{(6x+2)^2} = \frac{\dots x + \dots - \dots x}{(6x+2)^2} = \frac{\dots}{(6x+2)^2}$