



**PEMERINTAH PROVINSI LAMPUNG
DINAS PENDIDIKAN DAN KEBUDAYAAN
SMA NEGERI 1 PENAWAR AJI**



Alamat: Jln. Anthoni Murad Kmp. Panca Tunggal Jaya Kec. Penawar Aji Kab. Tulang Bawang

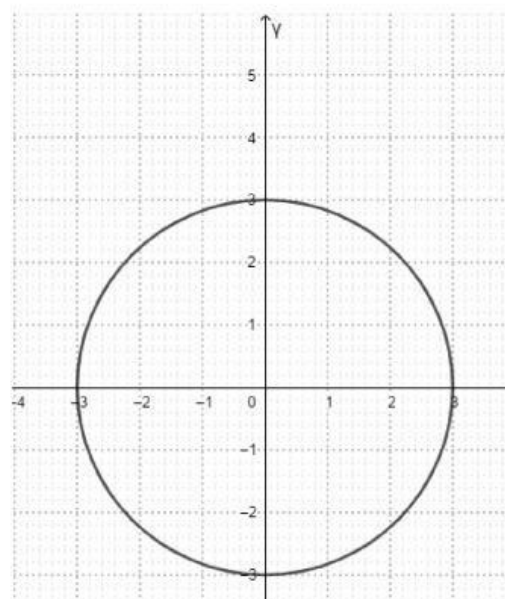
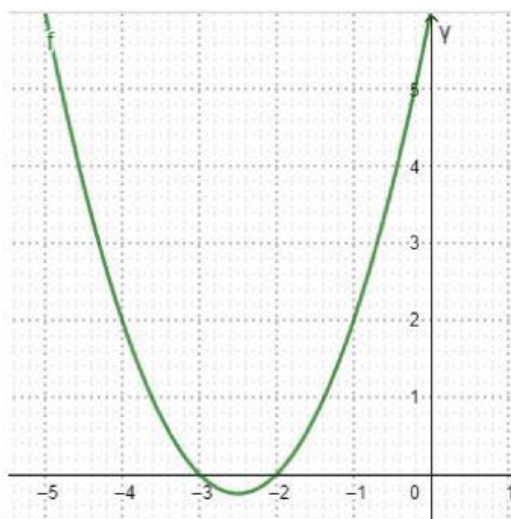
**ASESMEN SUMATIF TENGAH SEMESTER GANJIL
TAHUN PELAJARAN 2024/2025**

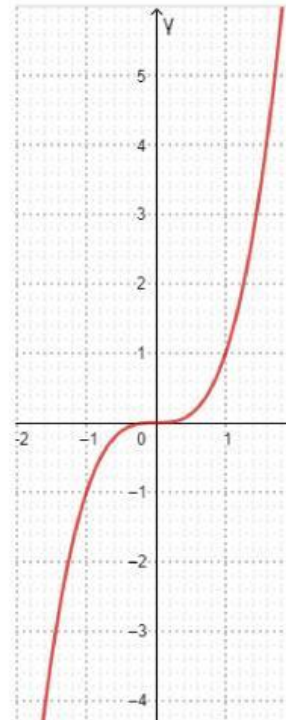
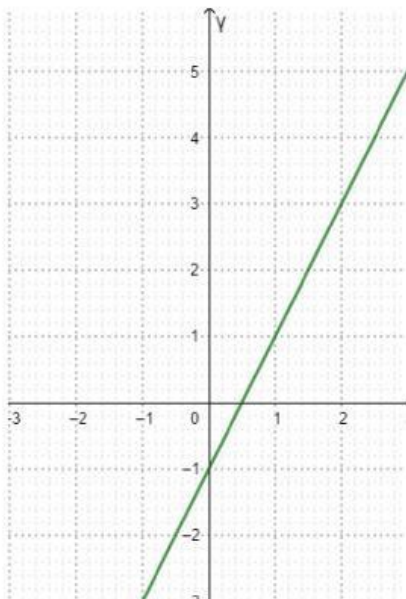
MATA PELAJARAN : MATEMATIKA

KELAS : XI

GURU MATA PELAJARAN : ASTERIA PUSPITA NINGRUM, S.Pd., Gr.

1. Dari grafik berikut, berikan tanda “x” pada grafik yang merupakan fungsi.





2. Tentukan domain dari fungsi berikut:

$$f(x) = \sqrt{7x - 21}$$

Jawab:

$$7x - 21 \dots\dots\dots$$

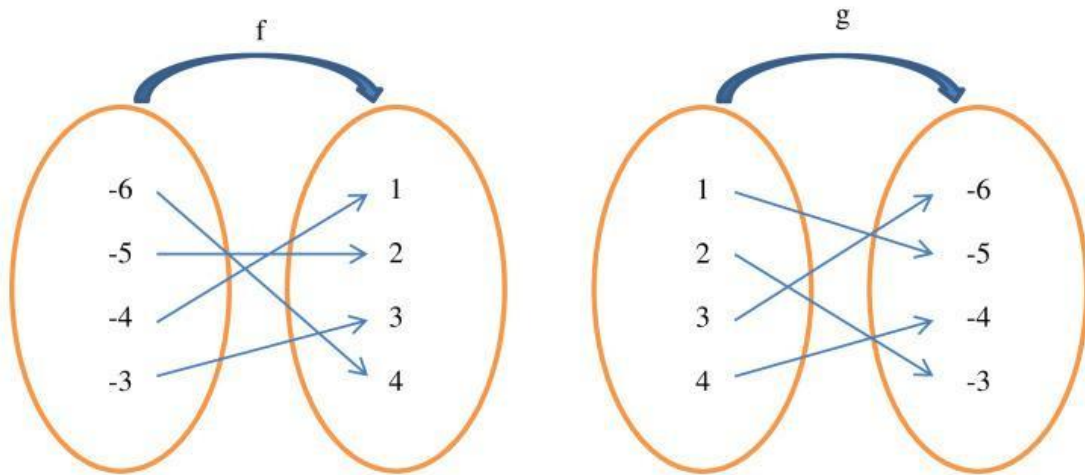
$$\dots\dots\dots$$

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

$$\dots\dots\dots$$

$$\text{Jadi, } D_f = \{ \dots\dots \mid \dots\dots\dots, \dots\dots \in \mathbb{R} \}$$

3. Diketahui:



Tentukan pasangan anggota himpunan dari:

a. $(f \circ g)(x)$

b. $(g \circ f)(x)$

c. $(f \circ g)(3)$

d. $(g \circ f)(-5)$

Jawab:

a. $(f \circ g)(x) = \{(\dots, \dots), (\dots, \dots), (\dots, \dots), (\dots, \dots)\}$

b. $(g \circ f)(x) = \{(\dots, \dots), (\dots, \dots), (\dots, \dots), (\dots, \dots)\}$

c. $(f \circ g)(3) = \dots$

d. $(g \circ f)(-5) = \dots$

4. Diketahui:

$$f(x) = \frac{2}{5}x - 7$$

$$g(x) = 10x + 5$$

Tentukan:

a. $(f \circ g)(x)$

b. $(f \circ g)(-2)$

c. $(g \circ f)(x)$

d. $(g \circ f)(2)$

Jawab:

a. $(f \circ g)(x) = \dots\dots\dots(\dots\dots\dots(\dots\dots\dots))$
 $= \frac{\dots\dots\dots}{\dots\dots\dots} (\dots\dots\dots + \dots\dots\dots) - \dots\dots\dots$
 $= \dots\dots\dots + \dots\dots\dots - \dots\dots\dots$
 $= \dots\dots\dots - \dots\dots\dots$

b. $(f \circ g)(-2) = \dots\dots\dots - \dots\dots\dots$
 $= \dots\dots\dots - \dots\dots\dots$
 $= \dots\dots\dots - \dots\dots\dots$
 $= \dots\dots\dots$

$$\begin{aligned}
 \text{c. } (g \circ f)(x) &= \dots\dots(\dots\dots(\dots\dots)) \\
 &= \dots\dots\left(\frac{\dots\dots}{\dots\dots} \dots\dots - \dots\dots\right) + \dots\dots \\
 &= \dots\dots - \dots\dots + \dots\dots \\
 &= \dots\dots - \dots\dots
 \end{aligned}$$

$$\begin{aligned}
 \text{d. } (g \circ f)(2) &= \dots\dots - \dots\dots \\
 &= \dots\dots \cdot \dots\dots - \dots\dots \\
 &= \dots\dots - \dots\dots \\
 &= \dots\dots
 \end{aligned}$$

5. Tentukan invers dari:

a. $f(x) = 6x + 15$.

b. $g(x) = \frac{5x-2}{4}$

Jawab:

$$\begin{aligned}
 \text{a. } 6x + 15 &= \dots\dots \\
 \dots\dots &= \dots\dots - \dots\dots \\
 \dots\dots &= \frac{\dots\dots - \dots\dots}{\dots\dots} \\
 f^{-1}(x) &= \frac{\dots\dots - \dots\dots}{\dots\dots}
 \end{aligned}$$

$$\text{b. } \frac{5x-2}{4} = \dots\dots$$

$$\dots\dots - \dots\dots = \dots\dots$$

$$\dots\dots = \dots\dots + \dots\dots$$

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

$$g^{-1}(x) = \frac{\dots\dots + \dots\dots}{\dots\dots}$$