IBNU HAJAR

01 TPLP005

C. Soal latihan / tugas

1.) $F(x) = 1 - x^2$

$\Rightarrow$ Domain $= \{x \mid x \in \mathbb{R}\}$

$\Rightarrow x = 0$

$1 - x^2 = 1 - 0^2 = 1$

$\Rightarrow$ Range $= \{y \mid y \leq 1, y \in \mathbb{R}\}$

2.) $F(t) = \frac{1}{t}$

$\Rightarrow t \neq 0$

$\Rightarrow$ Domain $= \{t \mid t \neq 0, t \in \mathbb{R}\}$

$\Rightarrow$ Range $= \{y \mid y \neq 0, y \in \mathbb{R}\}$

3.) $F(x) = 1 - \sqrt{x}$

$\Rightarrow$ Di dalam akar ≥ 0

$\Rightarrow$ Domain $= \{x \mid x \geq 0, x \in \mathbb{R}\}$

$\Rightarrow y = 1 - x$

$0 = 1 - x$

$0 - 1 = -x$

$-1 = -x$

$x = 1$

$\Rightarrow$ Range $= \{y \mid y \leq 1, y \in \mathbb{R}\}$

4.) $g(t) = \frac{1}{1+t}$

$\Rightarrow 1 + t \neq 0$

$t \neq -1$

$\Rightarrow$ Domain $= \{x \mid x \neq -1, x \in \mathbb{R}\}$

$\Rightarrow 0 \neq \frac{1}{1+t}$

$0 \neq 1$

$\Rightarrow$ Range $= \{y \mid y \neq 0, y \in \mathbb{R}\}$

5.) $h(t) = \frac{1}{1-5t}$

$\Rightarrow 1-5t \neq 0$

$-5t \neq -1$

$t \neq \frac{-1}{-5}$

$t \neq \frac{1}{5}$

$\Rightarrow$ Domain $= \{x \mid x \neq \frac{1}{5}, x \in \mathbb{R}\}$

$\Rightarrow 0 \neq \frac{1}{1-5t}$

$0 \neq 1$

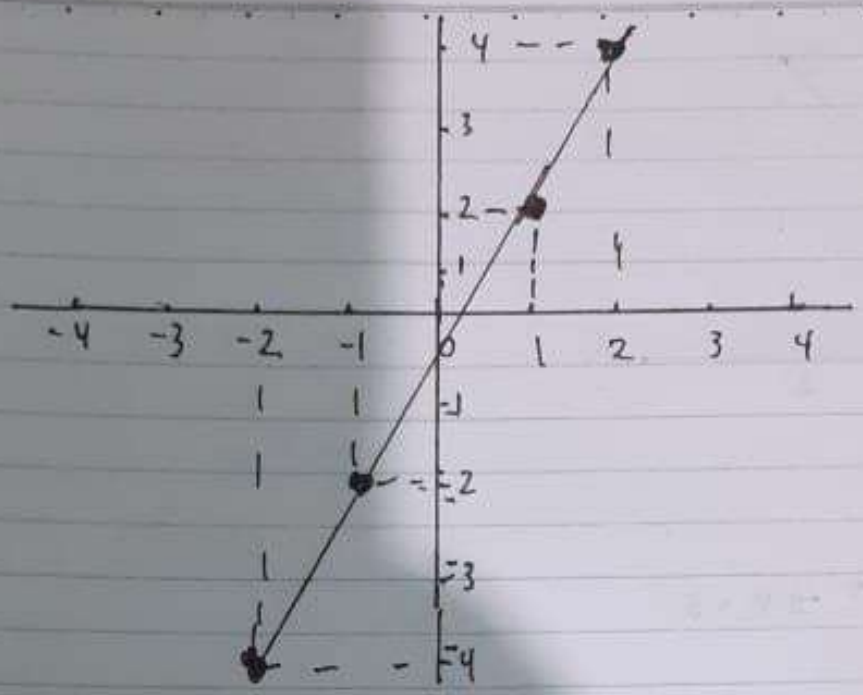
$\Rightarrow$ Range $= \{y \mid y \neq 0, y \mid \mathbb{R}\}$

6.) $\Rightarrow F(x) = 2x$

$F(-2)$ & $F(2)$

$\Rightarrow$ Domain $= \{-2, -1, 0, 1, 2\}$

X	$F(X) = y$	(x, y)
-2	-4	$(-2, -4)$
-1	-2	$(-1, -2)$
0	0	$(0, 0)$
1	2	$(1, 2)$
2	4	$(2, 4)$



=> Range = {-4, -2, 0, 2, 4}

7.) => $F(x) = 2x^2 + 4x + 2$

=> Domain = {-1, 0, 2}

=>

x	F(x) = y	
-1	1	(-1, 1)
0	2	(0, 2)
2	18	(2, 18)

=> Range = {0, 1, 2, 18}

=> $2x^2 + 4x + 2 = a(2), b(4), c(2)$

$D = b^2 - 4ac$

$= 4^2 - 4 \cdot 2 \cdot 2$

$= 16 - 16 = 0$

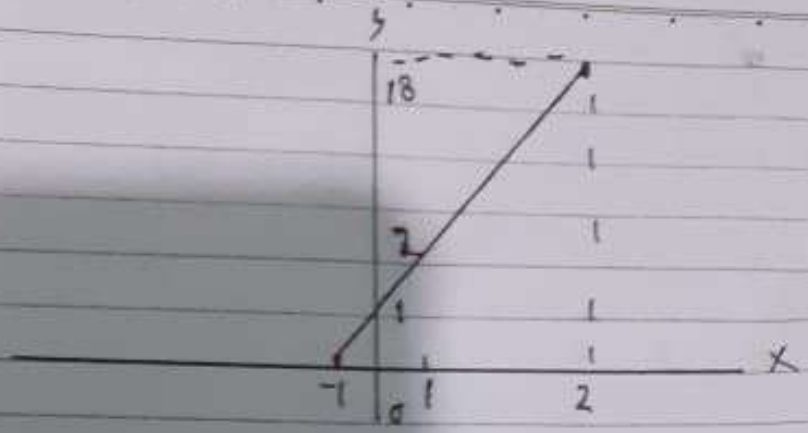
=> Sumbu simetri

$\frac{-b}{2a} = \frac{-4}{2.2} = -1$

$y = 2x^2 + 4x + 3$

$= 2(-1)^2 + 4(-1) + 3$

$= 1$



8. ⇒ titik potong sumbu $x \rightarrow y = 0$

$0 = 2x^2 + 4x + 5$

$D = b^2 - 4ac$

$= 4^2 - 4 \cdot 2 \cdot 5$

$= -24$

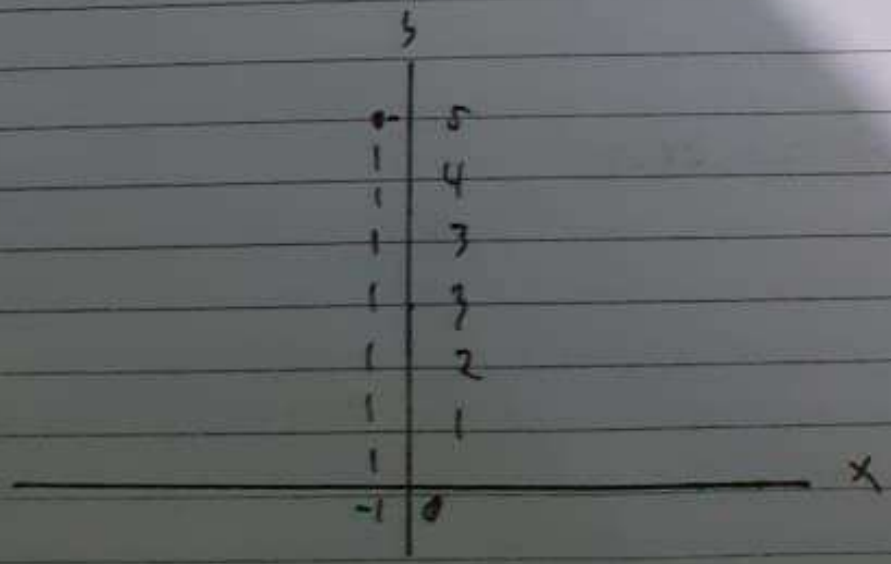
⇒ Titik potong sumbu $y \rightarrow x = 0$

$y = 2(0)^2 + 4(0) + 5$

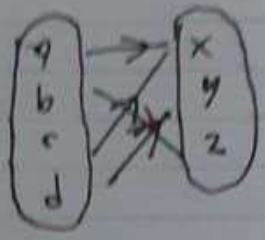
$= 5 \rightarrow (0, 5)$

⇒ sumbu simetri

$\frac{-b}{2a} = \frac{-4}{2 \cdot 2} = -1$

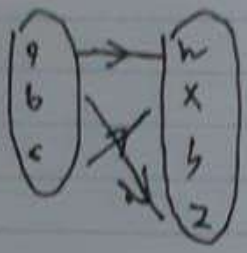


9.) (i)



Fungsi subjektif

(ii)



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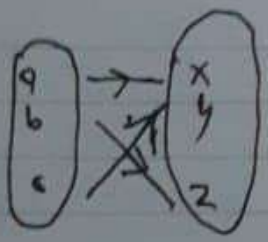
(iii)



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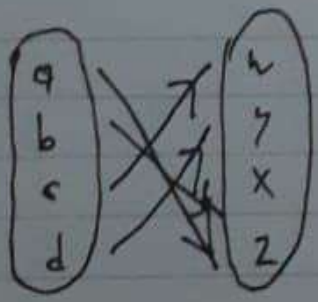
(iv)



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10.) $F(x) = 1 + x^2$

$\Rightarrow$ Domain $= \{x \mid x \in \mathbb{R}\}$

$\Rightarrow x = 0$

$1 + x^2 = 1 + 0^2 = 1$

$\Rightarrow$ Range $\{y \mid y \geq 1\}$ $y \in \mathbb{R}$

11) $F(t) = \frac{1}{t}$

$\Rightarrow 1 \neq 0$

$\Rightarrow$ Domain $= \{t \mid t \neq 0, t \in \mathbb{R}\}$

$\Rightarrow$ Range $= \{y \mid y \neq 0, y \in \mathbb{R}\}$

12) $F(x) = 1 - \sqrt{x}$

$\Rightarrow$ = Di dalam akar ≥ 0

$\Rightarrow$ = Domain $= \{x \geq 0, x \in \mathbb{R}\}$

$\Rightarrow y = 1 - x$

$0 = 1 - x$

$0 - 1 = -x$

$x = 1$

$\Rightarrow$ Range $= \{y \mid y \leq 1, y \in \mathbb{R}\}$

13.) $g(t) = \frac{1}{1+t}$

$\Rightarrow 1 + t \neq 0$

$1 \neq 1$

$\Rightarrow 0 \neq \frac{1}{1+t}$

$0 \neq 1$

$\Rightarrow$ Domain $= \{x \mid x \neq -1, x \in \mathbb{R}\}$

$\Rightarrow$ Range $= \{y \mid y \neq 0, y \in \mathbb{R}\}$

14.) $h(t) \frac{1}{1-5t}$

$\Rightarrow 1 - 5t \neq 0$

$-5t \neq -1$

$t \neq \frac{1}{5}$

$\Rightarrow 0 \neq \frac{1}{1-5t}$

$0 \neq 1$

$\Rightarrow$ Domain $= \{x \mid x \neq \frac{1}{5}, x \in \mathbb{R}\}$

$\Rightarrow$ Range $= \{y \mid y = 0, y \in \mathbb{R}\}$