

تابع

14, 15

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$$f(x) = \sqrt{1-x^2} \quad 1-x^2 \geq 0 \quad x^2 \leq 1 \quad -1 \leq x \leq 1$$

$$g = \{(-1, 1), (0, 2), (1, 0), (1, 2)\}$$

$$rg = \{f\}$$

$$\{(-1, 2), (0, 2), (1, 2)\}$$

$$r + 2 + 2 = 11$$

$$f(x) = 2x - 1 \quad x \geq 3 \rightarrow [\infty, +\infty)$$

$$g(x) = \frac{1}{x} x + 3 \quad x \leq 3$$

$$Df = [3, +\infty) \quad 2x - 1 \geq 0$$

$$Dg = (-\infty, 3]$$

$$\frac{1}{x} x \leq 1 \quad \frac{1}{x} x + 3 \leq 4$$

$$Rf \cup Rg = [\infty, +\infty) \cup (-\infty, 4]$$

$$y = -\frac{x^2}{r} + x + 3$$

$$-(a, b) \rightarrow > \frac{r}{r}$$

$$| + \phi - \phi +$$

$$\sqrt{b-a} ?$$

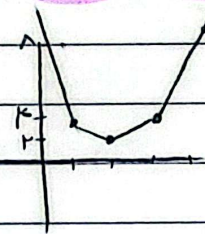
$$\sqrt{r} = r$$

$$-\frac{1}{r} x^2 + x + 3 > \frac{r}{r}$$

$$-x^2 + 2x + 4 > r$$

$$x^2 - 2x - 3 < 0$$

$$(x+1)(x-3) < 0$$



$$y = |x-1| + |x-2| + |2x-3|$$

$$x=1 \rightarrow 1$$

$$x=2 \rightarrow 2$$

$$x=3 \rightarrow 3$$

$$\min = 1$$

s.a.m

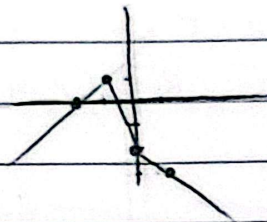
$$y = |x|^0 - 1 |x+1|^{-1}$$

$$x = -1 \rightarrow 1$$

$$x = 0 \rightarrow -2$$

$$a = -1 \quad 0 \quad 0$$

21 - 1 - 14



$$R_f = (-\infty, 1]$$

$$m=f \rightarrow \frac{u+2u+f}{u+1} = u+f, \frac{u+1}{u+1}$$

$$y = \frac{x^r + px + m}{x+1}$$

$$R \neq R$$

$$x^r + (\omega - \gamma)x + m - \gamma = 0$$

$$y = x^2, \quad 2x + m$$

$$\Delta = 4\omega + 4\rho - 10\gamma - \cancel{r(1)(m-\gamma)}$$

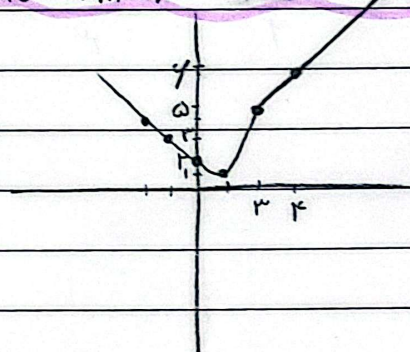
$$y^2 - 4y + 4 - F_m \geq 0 \rightarrow \Delta \leq 0$$

14 m - 48

$$\Delta = P_4 - P(P\omega - Fm) - (100 - 14m)$$

~~14m - 45 < 0~~ ~~14m < 45~~

~~$m \leq K \rightarrow \text{random } K$~~



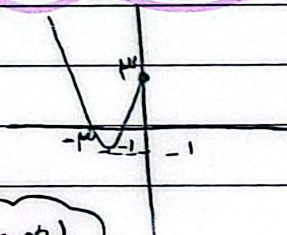
$$f(x) = \begin{cases} x+1 & ; x \geq 3 \\ x^2 - 1 & ; 0 \leq x < 3 \\ |x| + 1 & ; x < 0 \end{cases}$$

$$Rf = [1, +\infty)$$

$$P(x) = \begin{cases} x^2 + 4x + 4 & ; x \leq 0 \\ [4x] - 4x & ; x > 0 \end{cases}$$

$\downarrow$
 $(-1, 0]$

$$R_f = [-1, +\infty)$$



s.a.m

$$y = a + 1 - \sqrt{r(a+1)} \geq 0 \quad r(a+1) \geq -1 \quad a \geq -\frac{1}{r} \quad (9)$$

$$D = [-\frac{1}{r}, +\infty) \quad R = (-\infty, \infty] \quad ab = p \quad \xrightarrow{r} \quad r \cdot x - \frac{1}{r} = -y$$

$$\rightarrow a+1 = \omega \quad a = r$$

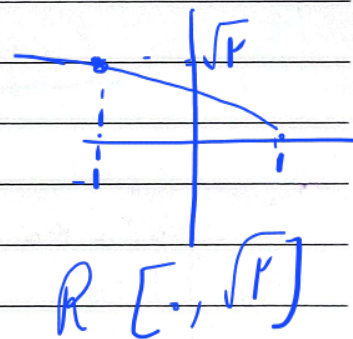
$$f(x) = r\sqrt{x+1} + r\sqrt{1-x}$$

$$f(x) + g(x) = r\sqrt{r+1} + r\sqrt{1-x}$$

$$Df = Dg \quad y = \frac{f(x)}{r} - \frac{g(x)}{r}$$

$$f(x) + g(x) = r\sqrt{r+1} + r\sqrt{1-x} \quad \xrightarrow{r} \quad r(\sqrt{1-x} + \sqrt{1+x}) \quad \xrightarrow{r} \quad r(\sqrt{1-x} + \sqrt{1+x})$$

$$\rightarrow g(x) = \sqrt{1+x} - \sqrt{1-x} \quad \frac{f(x)}{r} - \frac{g(x)}{r} = \sqrt{1-x}$$



s.a.m