

۲ (۱۲۶)

$$\frac{2\sqrt{2} + 3\sqrt{3}}{2 - \sqrt{4}} - \frac{2}{\sqrt{3} - 1} = \frac{(2\sqrt{2} + 3\sqrt{3})(2 + \sqrt{4})}{19} - (\sqrt{3} + 1)$$

$$= \frac{19\sqrt{2} + 19\sqrt{3}}{19} - (\sqrt{3} + 1) = \frac{19(\sqrt{2} - 1)}{19} = \sqrt{2} - 1$$

(۱۲۷) اینجا مسئله ریاضی را ببینید.

۲ (۱۲۸)

$$P(1) = P(-1) = 0 \Rightarrow Q(x) = P(1) + P(-1) = 0$$

۱ (۱۲۹)

$$\alpha + \beta = \frac{1}{\alpha\beta} \Rightarrow \frac{2^{m-1}}{\mu} = \frac{\mu}{m-2} \Rightarrow \begin{cases} m = -1 \Rightarrow \mu^2 + \mu + 1 = 0 \quad \Delta < 0 \\ m = \frac{1}{\mu} \Rightarrow \mu^2 + \mu - 1 = 0 \quad \Delta > 0 \end{cases}$$

۲ (۱۳۰)

$$1 < \frac{x+1}{x-1} < 2 \xrightarrow{-\frac{1}{x-1}} \frac{1}{x} < \frac{\mu}{\mu(x-1)} < \frac{2}{x} \Rightarrow \mu > \frac{x-1}{\frac{\mu}{x}} > \frac{x}{2}$$

(۰/۸, ۲)

$$\Rightarrow \mu > x - 1 > \frac{x}{2} \Rightarrow \mu > x > \frac{x}{2} = 0/8 \Rightarrow$$

۱ (۱۳۱)

$$\begin{cases} c = a \\ a + b + c = a + b + a = 11 \Rightarrow a + b = 5 \Rightarrow \mu a = 5 \Rightarrow a = \frac{5}{\mu}, b = \frac{11}{\mu} - a \\ fa - 2b + c = \epsilon a - 2b + a = a \Rightarrow \epsilon a - 2b = 0 \end{cases}$$

۱۳

میلا (مضوری) کتب .  $y = \frac{5}{\mu} x^2 + \frac{11}{\mu} x + a$

میلا (مضوری) کتب

$\approx (134)$

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

$$\Rightarrow \sqrt{x-1} = 1 \Rightarrow x=14 \Rightarrow (14, 4) \Rightarrow \sqrt{14^2 + \epsilon^2} = 4\sqrt{14}$$

$\approx (134)$

$$|x^2 - 4| \leq \epsilon x \xrightarrow{x > 0} |(x - \sqrt{4})(x + \sqrt{4})| \leq \epsilon x$$

$$\Rightarrow (x^2 - 4x + 4) \leq \epsilon x \Rightarrow x^2 - \omega x + 4 = (x^2 - \epsilon)(x^2 - 1) \leq 0$$

$$\xrightarrow{x > 0} (x-2)(x-1) \leq 0 \Rightarrow x \in (1, 2)$$

$(135)$

$$g(x) = -(x-1)^2 + 4$$
$$f(x) \in [0, 1) \Rightarrow g \circ f \in \begin{cases} 4 - 4 = 0 \\ 4 - 1 = 3 \end{cases} [0, 3)$$

$(136)$

$$g(4) = 4, g(1) = 4 \xrightarrow{\text{e.g.}} 13$$

(134)

$$f(x) = x - \frac{r}{x} \quad ; \quad x \in (-\infty, 0) \Rightarrow R_f = \mathbb{R}$$

$$f^{-1}(x) = -x \Rightarrow f(-x) = x \Rightarrow -x + \frac{r}{-x} = x$$

$$\Rightarrow rx = \frac{r}{x} \Rightarrow x^2 = 1 \Rightarrow x = 1$$

مطلوبہ

(135)

$$\log_{1/r} y = \frac{\log y}{\log 1/r} = \frac{1 + \log_r r}{r + \log_r r} = \frac{1 + \log y}{r + \log y} = \frac{r, y}{r, y} = \frac{ry}{ry} = \frac{ry}{1/r}$$

(136)

$$f(-\frac{1}{\mu}) = 0 \Rightarrow \begin{cases} -r + r^b = -r \\ -r + r^{-\frac{1}{\mu}a+b} = 0 \end{cases} \Rightarrow \begin{cases} r = r \\ r^{-\frac{1}{\mu}a+b} = r \end{cases} \Rightarrow b=1, a=-r$$

$$\Rightarrow f(x) = -r + r^{-rx+1} \Rightarrow f(-\frac{a}{\mu}) = -r + r^{a+1} = 0$$

(137)

$$f^{-1}(r) = x \Rightarrow f(x) = \frac{r^x + (\frac{1}{r})^x}{r} = r \Rightarrow r^x + (\frac{1}{r})^x = r$$

$$\Rightarrow T + \frac{1}{T} = r \Rightarrow T^2 - rT + 1 = 0 \Rightarrow T = r + \sqrt{r^2 - 4} \leq r - \sqrt{r^2 - 4}$$

$$\Rightarrow r^x = r + \sqrt{r^2 - 4} \leq \frac{r - \sqrt{r^2 - 4}}{r} \Rightarrow x = \log_r (r + \sqrt{r^2 - 4})$$

کوچتر از یک

$$\tan(-\gamma_0) (-\cos \gamma_0) + \tan(-\gamma_0) \sin(\gamma_0) = \sqrt{r} \left(\frac{\sqrt{r}}{r}\right) - \sqrt{r} \left(\frac{\sqrt{r}}{r}\right) = 0 \quad (140)$$

(141)

$$a + |b| = r \xrightarrow{b < 0} a - b = r$$

$$\Rightarrow a = 1, b = -r$$

$$a + b \sin\left(\frac{\pi}{r} + \frac{\sqrt{\pi}}{\mu}\right) = 0 \Rightarrow a + \frac{b}{r} = 0$$

$$\begin{aligned} |a| + c &= 1 \\ -|a| + c &= -r \end{aligned} \Rightarrow c = -1, |a| = r \Rightarrow T = \gamma\pi = \frac{r\pi}{|b|} \Rightarrow |b| = \frac{1}{r} \quad (142)$$

$$\Rightarrow \left|\frac{a}{b}\right| = \left|\frac{r}{\frac{1}{r}}\right| = r \Rightarrow \begin{matrix} x=0 \\ \text{تروی} \end{matrix} \Rightarrow \frac{a}{b} < 0 \Rightarrow \frac{a}{b} = -r$$

(143)

$$\sin\left(2x - \frac{\pi}{4}\right) = \sin\left(\frac{\pi}{4} - \left(x + \frac{\pi}{4}\right)\right) = \sin\left(\frac{\pi}{4} - x\right)$$

$$2x - \frac{\pi}{4} = \frac{\pi}{4} - x + 2k\pi \rightarrow x = \frac{\pi}{4} + \frac{2k\pi}{3} \checkmark$$

$$2x - \frac{\pi}{4} = \pi - \left(\frac{\pi}{4} - x\right) + 2k\pi \rightarrow x = (2k+1)\pi$$

خلف

(144)

$$\lim_{x \rightarrow (-2)^-} \frac{[(-2)^-] + 2}{x + 2} = \frac{0}{0} = 0$$

(145)

$$\frac{a}{x} = \frac{1}{x}, n=1 \Rightarrow a = \frac{1}{x}, n=1$$

$$\lim_{x \rightarrow 2} \frac{\frac{1}{x} - \frac{1}{2}}{x - 2} = \frac{\frac{1}{x} - \frac{1}{2}}{x - 2} = \frac{\frac{2-x}{2x}}{x-2} = \frac{1}{2x}$$

(146)

$$\begin{cases} 2 = -2 - 2b + c \\ -\frac{1}{2} = 2 + b \end{cases} \Rightarrow \begin{cases} 2b - c = -4 \\ b = -\frac{5}{2} \end{cases} \Rightarrow b = -\frac{5}{2}, c = \frac{1}{2}$$

.....

$$f(x) = \frac{(x^p + px)}{(x^p - x)^p} \Rightarrow f(x) = \frac{x^p + px - 1 + 1}{(x^p - x)^p} = \frac{(x^p + px - 1)}{(x^p - x)^p} + \frac{1}{(x^p - x)^p} \quad (\text{IFV})$$

$$\Rightarrow f'(x) = \frac{px + p}{(x^p - x)^p} + p(x^p - x)^{p-1}(px - 1) \left( \frac{-1}{(x^p - x)^p} \right)$$

$$\Rightarrow \frac{p}{1} + p(\epsilon)(p) \left( \frac{-1}{p^p} \right) = \frac{p}{p} - \frac{p}{p} = \frac{-1\omega}{p}$$

(IEA)

$$f'(x) = 1 + \frac{p - px}{p\sqrt{px - x^p}} = \frac{p\sqrt{px - x^p} + p - px}{p\sqrt{px - x^p}}$$

$$= \frac{p(\sqrt{x(\epsilon - x)} + (\epsilon - x))}{p\sqrt{(\epsilon - x)x}} = \frac{\sqrt{\epsilon x - x^2} + \epsilon - x}{\sqrt{x(\epsilon - x)}} = 0$$

$$\Rightarrow \sqrt{\epsilon x - x^2} = x - \epsilon \Rightarrow \epsilon x - x^2 = x^2 - \epsilon x + \epsilon \Rightarrow \epsilon x^2 - 1x + \epsilon = 0$$

$$\Rightarrow \epsilon x^2 - \epsilon x + \epsilon = 0 \Rightarrow x = \epsilon + \sqrt{\epsilon} \Rightarrow y = \epsilon + \sqrt{\epsilon} + \sqrt{\epsilon(\epsilon + \sqrt{\epsilon})}$$

$$y = \epsilon + \sqrt{\epsilon} + \sqrt{(\epsilon + \sqrt{\epsilon})(\epsilon - \epsilon - \sqrt{\epsilon})} = \epsilon + \sqrt{\epsilon} + \sqrt{\epsilon} = \epsilon + 2\sqrt{\epsilon}$$

$$\Rightarrow A = (\epsilon + \sqrt{\epsilon}, \epsilon + 2\sqrt{\epsilon})$$

$$y - x = 0$$

$$\frac{|\epsilon + 2\sqrt{\epsilon} - \epsilon - \sqrt{\epsilon}|}{\sqrt{\epsilon}} = 1$$

۱۴۹ خارج از بودجه

(۱۵۰)

$$\binom{9}{5} - \binom{7}{3}$$

(۱۵۱)

$$\frac{3! \cdot 5! \cdot 2!}{1!}$$

(۱۵۲) درگزینه‌ها نیست

$$\bar{x} = \frac{5 \times 10 + 4 \times 11 + 7 \times 12}{14} = 12$$

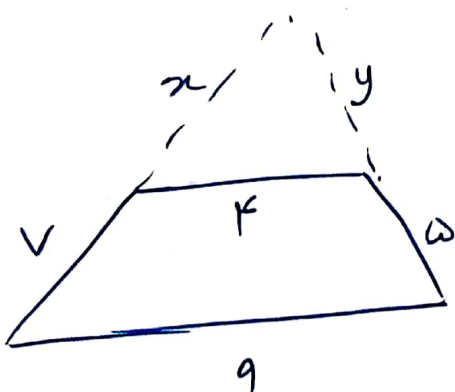
$$\text{Var} = \frac{5(-2)^2 + 4(1)^2 + 7(2)^2}{14} = 3.1428$$

$$\text{C.V} = \frac{\sqrt{3.1428}}{12}$$

(۱۵۳)

$$m_{BC} = \frac{\Delta y}{\Delta x} = \frac{5}{5} = 1 \rightarrow L_{BC}: y = x - 4 \rightarrow y - x + 4 = 0$$

$$AH = \frac{|5 - 1 + 4|}{\sqrt{2}} = \frac{1}{\sqrt{2}} = \frac{1}{\sqrt{2}}$$



$$\frac{x}{x+v} = \frac{4}{9} \Rightarrow \frac{x}{v} = \frac{4}{5} \Rightarrow x = \frac{4v}{5} \quad (154)$$

$$\frac{y}{w} = \frac{4}{5} \Rightarrow y = \frac{4w}{5}$$

$$yp = 4 + 4 + \frac{4v}{5} = \frac{4v}{5} = 12/5$$

$$\triangle HDC \sim \triangle ABD \Rightarrow \frac{S}{S'} = \left( \frac{DC}{AB} \right)^2 = \frac{\left( \frac{F}{\sqrt{V}} \right)^2}{\mu} = \frac{14}{11} \quad (100)$$