

Date

$$\tan u = \frac{r}{r} \Rightarrow \tan \frac{u}{r} = \frac{\sin \frac{u}{r}}{\cos \frac{u}{r}} = \frac{\sin \frac{u}{r}}{\cos \frac{u}{r}} = 134$$

$$\frac{\sin^2 \frac{u}{r} - \cos^2 \frac{u}{r}}{\sin \frac{u}{r} \cos \frac{u}{r}} = \frac{-\cos 2\frac{u}{r}}{\frac{1}{2} \sin \frac{u}{r}} = -2 \cot \frac{u}{r} = -\frac{2}{\tan \frac{u}{r}} = -\frac{4}{r}$$

$$\rightarrow \Delta z = \frac{r}{r}$$

$$135 - \text{نرسنه}$$

$$g(f(n)) = \frac{r \left( \frac{r_n - 1}{n+1} \right) + r}{r - \frac{r_n - 1}{n+1}}$$

$$f(n) > \frac{r_n - 1}{n+1} \quad 136$$

$$= \frac{\frac{r_n - r}{n+1} + r}{\frac{r_n + r - r_{n+1}}{n+1}} = \frac{4n}{n+1} = \frac{r}{n+1} > r_n$$

$$\text{جواب نرسنه}$$

$$\lim_{n \rightarrow 2} \left( \frac{4}{n(n-2)} - \frac{n+1}{n-2} \right) = \lim_{n \rightarrow 2} \frac{4 - (n+1)n}{n(n-2)} = \lim_{n \rightarrow 2} \frac{-n^2 - n + 4}{n(n-2)}$$

$$137 - \text{نرسنه}$$

$$= \lim_{n \rightarrow 2} \frac{-(n+3)(n-2)}{n(n-2)} = \lim_{n \rightarrow 2} \frac{-(n+3)}{n} = -\frac{5}{2}$$

$$\lim_{n \rightarrow \infty} \frac{n}{1 - \sqrt{1-n}} = \lim_{n \rightarrow \infty} \frac{n(1 + \sqrt{1-n})}{n} = \lim_{n \rightarrow \infty} (1 + \sqrt{1-n}) = p$$

$$\Rightarrow a \leq 2$$

سعیده نوری گرمی

$$\text{جواب نرسنه}$$

Subject

Date

|        |   |   |    |    |    |
|--------|---|---|----|----|----|
| روز    | ۴ | ۸ | ۱۰ | ۱۲ | ۱۴ |
| فرکانس | ۷ | ۹ | ۱۷ | ۱۱ | ۴  |

۱۳۱ - نرینه ۳

$$\bar{x} = \frac{4 \times 7 + 8 \times 9 + 10 \times 17 + 12 \times 11 + 14 \times 4}{7 + 9 + 17 + 11 + 4} = \frac{511}{50} = 10.22$$

$$S = \sqrt{\frac{4(4-10.22)^2 + 9(8-10.22)^2 + 17(10-10.22)^2 + 11(12-10.22)^2 + 4(14-10.22)^2}{50}}$$

$$= \sqrt{\frac{112 + 34 + 55 + 96}{50}} = \sqrt{\frac{297}{50}} = \sqrt{5.94} = 2.44$$

$$CV = \frac{S}{\bar{x}} = \frac{2.44}{10.22} = 0.24$$

$$P(A) = \frac{\binom{14}{1} \binom{5}{1} \binom{3}{1}}{\binom{12}{3}} = \frac{14 \times 5 \times 3}{220} = \frac{3}{11}$$

۱۳۲ - نرینه ۲

$$\frac{3n+1}{n-3} - 3 < 0 \Rightarrow \frac{10}{n-3} < 0 \Rightarrow n < 3$$

۱۳۳ - نرینه ۱

$$\frac{3n+1}{n-3} + 1 > 0 \Rightarrow \frac{4n-2}{n-3} > 0$$

$$\Rightarrow n > 3 \text{ و } n < \frac{1}{2} \Rightarrow n < \frac{1}{2}$$

سعیده نوری گرمی

Subject

Date

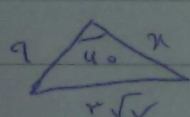
$$f^{-1}(x) = y \Rightarrow g(ya) = x \Rightarrow \frac{ya}{ya-1} = x \quad \text{۱۲۶ - نرسنه ۲}$$

$$\Rightarrow ya = ya - x \Rightarrow -x = -x \Rightarrow a = \frac{x}{x}$$

$$\log y = \log 9 + \log x = \log 9x \Rightarrow y = 9x \quad \text{۱۲۷ - نرسنه ۳}$$

$$x^{-v} \times y^{v+xy} = 1 \Rightarrow x^{v+xy-v} = x^0 \Rightarrow x^{xy} = 1 \Rightarrow y - 9x = 0$$

$$x1x = v \Rightarrow x = \frac{1}{x} \text{ و } y = x$$



$$[x\sqrt{v}]^2 = a^2 + x^2 - 2ax \cos u_0 \quad \text{۱۲۸ - نرسنه ۱}$$

$$4x^2 = 1 + x^2 - 9x \Rightarrow x^2 - 9x + 1 = 0$$

$$(x-4)(x-3) = 0 \Rightarrow x = 4, 3$$

$$A = \begin{bmatrix} 3 & 2 \\ 5 & 6 \end{bmatrix} \Rightarrow A^{-1} = \frac{1}{4} \begin{bmatrix} 6 & -2 \\ -5 & 3 \end{bmatrix} = \begin{bmatrix} \frac{3}{2} & -\frac{1}{2} \\ -\frac{5}{4} & \frac{3}{4} \end{bmatrix} \quad \text{۱۲۹}$$

$$A^{-1} \cdot B = \begin{bmatrix} \frac{3}{2} & -\frac{1}{2} \\ -\frac{5}{4} & \frac{3}{4} \end{bmatrix} \cdot \begin{bmatrix} 8 & -14 \\ 4 & -10 \end{bmatrix} = \begin{bmatrix} 10 & -14 \\ -11 & 15 \end{bmatrix} \quad \text{۱۳۰ - نرسنه ۴}$$

۴.

$$1.0 + 1v + 2^4 + 4^4 + 3. = 333 \quad \text{۱۳۱ - نرسنه ۲}$$

$$\frac{v^4}{333} \times 34 = 1.$$

سعيدہ نوري گرمی

Subject

Date

$$\int (9m^2 + \frac{1}{m^2} + 7) dm = \frac{1}{m} f(m) + c$$

۱۵۱ - زینب

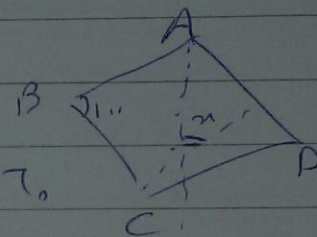
$$9m^2 + \frac{1}{m^2} + 7 = \frac{1}{m} (9m^3 - 1 + 7m^2) = \frac{1}{m} (f(m))$$

$$A = \frac{15}{12} D, B = \frac{5}{12} D, C = \frac{25}{12} D$$

۱۵۲ - زینب

$$A + B + C = D, 170 \Rightarrow \frac{52}{12} D = 170 \Rightarrow D = 4$$

$$A = 5, B = 1, C = 25 \Rightarrow 100 = 100 - \frac{52}{12} = 170$$



$$100 - 100 - \frac{52}{12} = 170$$

$$\Rightarrow 100 - 170 = 70$$

۱۵۳ - زینب

$$AB^2 = 2^2 + 2^2 - 2 \times 2 \times 2 \cos 120^\circ = 4 + 4 - 1 \cos 120^\circ$$

$$= 1 + 4\sqrt{3} \approx 1 + 4\sqrt{3} \approx (\sqrt{4} + \sqrt{3})^2 \Rightarrow AB \approx \sqrt{4} + \sqrt{3}$$



$$\frac{AP}{AB} = \frac{1}{3} \Rightarrow \frac{S_1}{S} = \frac{1}{9}$$

۱۵۴ - زینب

$$S_1 = \frac{1}{9} S$$

$$\frac{S_2}{S} = 1 - \frac{1}{9} = \frac{8}{9} \Rightarrow S_2 = \frac{8}{9} S$$

$$S_3 = \frac{1}{9} S$$

$$S_4 = \frac{1}{9} S$$

سعیده نوری گرمی

Date

$$(2, c) \in \frac{a-1}{nab} \Rightarrow a \geq \frac{1}{c}$$

۱۴۷-گزیده ۲

$$n \geq 0 \Rightarrow \sqrt[n]{n} \geq 1 \Rightarrow b \geq 0 \Rightarrow a+b \geq \frac{1}{c}$$

$$(3, -1) \rightarrow y \geq 3 \text{ عدد متغیر}$$

۱۴۸-گزیده ۲

$$(y-3)^2 \in \mathcal{E}p(n+1) \Rightarrow (9-3)^2 \in \mathcal{E}p(10+1) \Rightarrow p \geq \frac{36}{24}$$

$$2p \geq 3 \Rightarrow \mu \geq \frac{3}{2}$$

$$\frac{2b^2}{a} = \frac{2b^2}{a} \quad 14y^2 + d(n^2 - 2n) > \sqrt{d} \quad ۱۴۹-گزیده ۲$$

$$14y^2 + d(n^2 - 2n) > \sqrt{d} \quad a = 4, b = \sqrt{d}$$

$$14y^2 + d(n-1)^2 - d > \sqrt{d}$$

$$14y^2 + d(n-1)^2 > d \Rightarrow \frac{y^2}{d} + \frac{(n-1)^2}{14} \geq 1$$

$$\frac{2b^2}{a} \geq \frac{2\sqrt{d}}{4}, \frac{d}{4}$$

$$f(n) = \begin{cases} 2 & n \geq 2 \\ 2_{n-2} & n < 2 \end{cases}$$

۱۵۰-گزیده ۳

$$\int_0^2 (2n-2) dn + \int_2^{\infty} 2 dn = \left. n^2 - 2n \right|_0^2 + \left. 2n \right|_2^{\infty}$$

$$= 0 + \infty = \infty$$

سعیده نوری گرمی

Date

$$a_n = \frac{n^2 + 1}{n^2 + n} \Rightarrow a_1 = \frac{2}{2}, a_2 = \frac{5}{6}$$

۱۴۱ - نرسنه ۳

$$a_n < 0 \Rightarrow \text{جواب} = \frac{n}{n}$$

۱۴۳ - نرسنه ۳

$$\ln((n+1)(y-2)) = \ln ny \Rightarrow (n+1)(y-2) = ny$$

$$ny - 2n + y - 2 = ny$$

$$\ln(ny - 2n) = 2 \Rightarrow ny - 2n = 1 \Rightarrow ny = 2n + 1$$

$$\Rightarrow -2y - 2n + 2ny = 2 \Rightarrow ny + 1n - 2ny = -2$$

$$2n + 1 + 1n - 2(2n + 1) = -2 \Rightarrow -2n^2 + 13n + 1 = 0$$

$$x = \frac{1}{n} \Rightarrow nx = \frac{1}{n} \Rightarrow y = \frac{1}{n} \Rightarrow ny = 1$$

$$G \sin^2 \alpha - 5 \sin^2 \alpha + 2 G \cos^2 \alpha = 0 \Rightarrow 3 G \cos^2 \alpha - 5 \sin^2 \alpha = 0$$

$$\Rightarrow 6 \sin^2 \alpha = 5 \Rightarrow 6 \sin^2 \alpha + \sqrt{5} \Rightarrow \alpha = \frac{1}{2} \arcsin \frac{\sqrt{5}}{6}$$

سایت کنکور

جواب - نرسنه ۳

$$f'(x, y) = -\frac{\frac{1}{x} - \frac{1}{y}}{\frac{1}{x} - \frac{1}{y}} = f'(1, 1) = \frac{-\frac{1}{1} + \frac{1}{1}}{\frac{1}{1} - \frac{1}{1}} = -9$$

$$y - 1 = -9(x - 1) \Rightarrow y = -9x + 10$$

نرسنه اول

$$y = an^2 - n^2 - 2n + b \Rightarrow -1, a - 1 - 2 = b \Rightarrow a + b = 1$$

$$y' = 2an - 2n - 2 \Rightarrow y'' = 2a - 2 \Rightarrow 4a - 2 = 0 \Rightarrow a = \frac{1}{2}, b = \frac{1}{2}$$

$$y' = 2an - 2n - 2$$

ART

$$\begin{array}{c|c} x & -1 \\ y' & +1 - 2 + 2 \end{array}$$

$$f(1) = -\frac{1}{1} - 1 + \frac{1}{1} + \frac{1}{1} = \frac{1}{1}$$

سعیده نوری گرمی

Subject

Date

$$y = 2 \cos\left(\frac{\pi}{4} - \frac{\pi}{4}\right) \Rightarrow 1 - y = 1 - 2 \cos\left(\frac{\pi}{4} - \frac{\pi}{4}\right) \quad - 138$$

$$\Rightarrow 1 - y = -\cos\left(\frac{\pi}{4} - \frac{\pi}{4}\right) \Rightarrow y = 1 + \cos\left(\frac{\pi}{4} - \frac{\pi}{4}\right)$$

$$y' = \frac{1}{4} \sin\left(\frac{\pi}{4} - \frac{\pi}{4}\right) = \frac{1}{4} \sin\left(\frac{\pi}{4} - \frac{\pi}{4}\right)$$

$$= \frac{1}{4} \sin\left(\frac{\pi}{4}\right) = \frac{1}{4} \sin\left(\frac{\pi}{4}\right) = \frac{\sqrt{2}}{8}$$

۱۳۸ زینه ۴

$$\Rightarrow \frac{40}{100} \times \frac{18}{100} + \frac{60}{100} \times \frac{12}{100} = \frac{108}{1000} + \frac{72}{1000} \quad - 139$$

$$= \frac{180}{1000} \approx \frac{180}{1000} \times 100 = 18\% \quad - 139$$

$$\binom{4}{3} \left(\frac{1}{4}\right)^3 \left(\frac{3}{4}\right)^1 = \frac{4 \times 3^3}{4^3 \times 2^1} = \frac{27 \times 4}{16 \times 4} \quad - 140$$

$$= \frac{135}{1024}$$

زینه اول صحیح است

$$y = \sqrt{x} \sim y^2 = x \Rightarrow y = x^{\frac{1}{2}} \sim x^{\frac{1}{2}} \quad - 141$$

$$y = -\sqrt{-x} \sim -y^2 = x \Rightarrow y = -x^{\frac{1}{2}} \sim -x^{\frac{1}{2}}$$

زینه ۳ صحیح است

سعیده نوری گرمی

Subject \_\_\_\_\_

Date \_\_\_\_\_

۱۵۵ - زنگنه

ارتفاع  $\alpha$  کمانه = حجم استوانه

$$V = \frac{1}{3} \pi r^3$$

کره

$$r = \frac{1}{3} \times 16\pi = \frac{16\pi}{3}$$

$$\Rightarrow \frac{16\pi}{3} \times 1 = \frac{1}{3} \pi r^3 \Rightarrow r = 2 \Rightarrow S = 4\pi r^2 = 16\pi$$


سایت کنکور