

(111)

$$-m\lambda^2 + m\lambda + 1 = -\lambda - m$$

$$\rightarrow m\lambda^2 - (m+1)\lambda - (m+1) = 0$$

$$\Delta \leq 0 \rightarrow (m+1)^2 + 4m(m+1) < 0$$

$$(m+1)(m+1+4m) < 0 \rightarrow (m+1)(5m+1) < 0$$

$$\left(-\frac{1}{5} < m < -1\right) \quad \text{گزیده } \rightarrow$$

(112)

$$f(g^{-1}(a)) = -r$$

$$g^{-1}(a) = f^{-1}(-r) = \frac{1}{f} \rightarrow g\left(\frac{1}{f}\right) = a \rightarrow a = -\frac{1}{f} \times \frac{1}{f}$$

گزیده 2

(113)

$$\alpha\beta = \frac{\beta}{r\omega\alpha} \rightarrow r\omega\beta\alpha^2 = \beta \rightarrow \beta = 0 \text{ غ } \alpha = \pm \frac{1}{\omega} \text{ (الف) گزیده}$$

$$\alpha + \beta = \frac{-f}{r\omega\alpha} \rightarrow r\omega\alpha^2 + r\omega\alpha\beta = -f$$

$$1 + r\omega\alpha\beta = -f \rightarrow r\omega\alpha\beta = -\omega$$

$$\alpha = \frac{-b}{ra} = \frac{1}{\omega} \leftarrow \beta = 1 \leftarrow \alpha\beta = -\frac{1}{\omega}$$

(114)

$$D_f = \mathbb{R} - \{\mu\}$$

گزیده 2

$$\circ > -\frac{1}{\mu-x} > -f \xrightarrow{x-1} \circ < \frac{1}{\mu-x} < f$$

$$\left\{ \begin{array}{l} \mu-x > 0 \rightarrow x < \mu \\ \frac{f\mu-11}{\mu-x} < 0 \rightarrow \mu < \frac{11}{f} < x < \mu \end{array} \right.$$

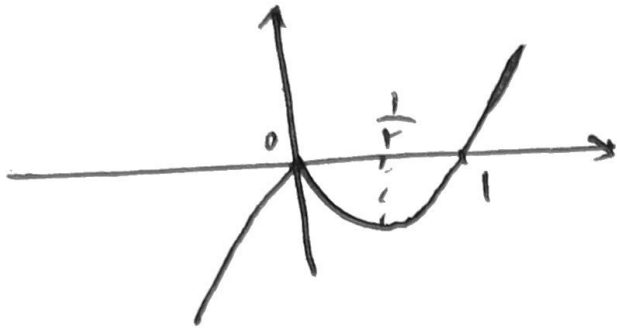
$$\xrightarrow{\text{استدلال}} x \in \left(-\infty, \frac{11}{f}\right)$$

سامل {1, 2}

(112)

$$y = (x-1)/|x| = \begin{cases} x^r - x; x \geq 0 \\ -x^r + x; x \leq 0 \end{cases}$$

(C) \checkmark



$z: (0, \frac{1}{r})$
 $a+b = \frac{1}{r}$

(113)

A) $\int_0^1 e^y \rightarrow 0 = 1 + Cx^r \xrightarrow{a+b} Cx^r x^r = -1$ (1)

B) $\int_{\frac{1}{r}}^0 e^y \rightarrow \frac{1}{r} = 1 + Cx^r \xrightarrow{a} Cx^r = -\frac{1}{r}$ (2)

$\frac{(1)}{(2)}$
 \Rightarrow

$r^b = r \rightarrow b=1 \rightarrow f(-1) = 1 + Cx^r$
 $\rightarrow f(-1) = 1 + \frac{Cx^r a}{r^b} = 1 + \frac{-\frac{1}{r}}{r}$
 $= \frac{1}{r}$

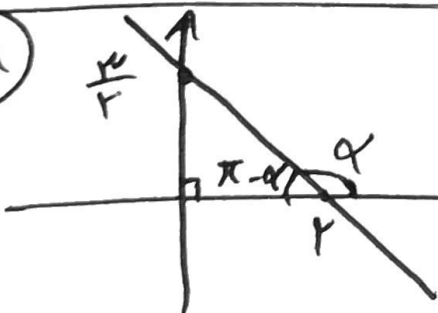
(C) \checkmark

(114)

A) $\int_{\frac{1}{r}}^r e^f \rightarrow A' \int_{\frac{1}{r}}^r e^f \rightarrow r = \frac{r}{r}a + \frac{1}{r}a = \frac{r}{r}a$

(C) \checkmark a=r

(11A)



$\tan(\frac{\pi}{r} - \alpha) = \cot \alpha$

$\cot(\pi - \alpha) = \frac{r}{\frac{r}{r}} = \frac{r}{r}$

$-\cot \alpha = \frac{r}{r} \rightarrow \cot \alpha = -\frac{r}{r}$

(C) \checkmark

(119)

$$A = \frac{r \cos(r\alpha - r') - r' \sin(11\alpha - r')}{\sin(11\alpha + r'') - \cos(r\alpha + r')}$$

$$A = \frac{-r \sin r'' - r' \sin r''}{-\sin r'' - \sin r''} = \frac{a}{r} \quad \text{②} \quad \checkmark$$

(120)

$$r \sin \alpha \cos \alpha - r' \sin \alpha \cos \alpha = 0$$

$$r \sin \alpha \cos \alpha (1 - r' \sin \alpha) = 0 \quad \text{②} \quad \checkmark$$

$$\sin \alpha = \frac{1}{r} \rightarrow \text{جواب}$$

$$\sin \alpha = 0 \rightarrow \text{جواب}$$

(121)

$$T = \frac{r\pi}{|a|} = \pi \rightarrow |a| = r \rightarrow a = \pm r \quad \text{②} \quad \checkmark$$

$$y = r \cos\left(\frac{\pi}{\pm r}\right) = r \cos\left(\frac{\pi}{r}\right) \rightarrow T = \frac{r\pi}{\frac{1}{r}} = r\pi$$

(122)

$$\lim_{x \rightarrow i^+} (f-g) + \lim_{x \rightarrow i^+} (f+g) = r \lim_{x \rightarrow i^+} f(x) \Rightarrow \omega + 0 = \omega = r \lim_{x \rightarrow i^+} f(x)$$

$$\lim_{x \rightarrow i^-} (f-g) + \lim_{x \rightarrow i^-} (f+g) = r \lim_{x \rightarrow i^-} f(x) \Rightarrow r+r = \omega = r \lim_{x \rightarrow i^-} f(x)$$

$$\rightarrow \lim_{x \rightarrow i} f(x) = \frac{\omega}{r} \quad \text{②} \quad \checkmark$$

(124) $\lim_{x \rightarrow \frac{1}{r}^+} \frac{a+r[-x]}{1-rx} = \frac{a-r}{0^-} = -\infty \rightarrow a-r > 0$ (124)

$x \rightarrow \frac{1}{r}^+$

$\rightarrow \lim_{x \rightarrow \frac{1}{r}} \left[\frac{x}{a} - x \right] \xrightarrow{a=r} \lim_{x \rightarrow \frac{1}{r}} \left[\frac{x}{r} - x \right] = [0] = -1$

$x \rightarrow \frac{1}{r}$

$x \rightarrow \frac{1}{r}^{\pm}$

(124)

(124)

$\lim_{x \rightarrow 0} \frac{f(x)}{g(x)} \rightarrow b=0$
 $f(x) = -ra$

$\frac{a}{f(b)} = \frac{a}{-ra} = -\frac{1}{r}$

(124)

(124)

$y = \frac{1}{v}x + \frac{a}{v} = \frac{ax-1}{rx+1}$

(124)

$\rightarrow \left(\frac{r}{v}x^r + \frac{1a}{v}x + \frac{1}{v}x + \frac{a}{v} = ax-1 \right) \times v$

$\rightarrow rx^r + 19x - va x + 1r = 0$

$\rightarrow rx^r + (19 - va)x + 1r = 0 \rightarrow A=0$

$a = \frac{r}{v} \rightarrow x = -r$

$a = r \checkmark$

(129)

$$\frac{f(0) - f(-1)}{0 + 1} = -11 = \frac{(1) - (\lambda(-a+1))}{1} = -11$$

$$\rightarrow 1 + \lambda a - \lambda = -11 \rightarrow a = -\frac{1}{\lambda}$$

$$f'(-\tau a) = f'(1) = ?$$

(2) in

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

$$f'(1) = r^2 (\frac{1}{r}) - r = 1r - r = \lambda$$

(130)

$$f' = r x^r - 1r = 0 \rightarrow x = \pm r$$

(3) in

x	$-r$	r
f'	$+$	$-$
f	\nearrow	\searrow

min $\rightarrow A \Big|_{+r}$

(131)

$$S = r x y = r x \sqrt[r]{F - x} = r \sqrt[r]{F x^r - x^r}$$

$$S' = r x \frac{1r x^{r-1} - F x^{r-1}}{r \sqrt[r]{(F x^r - x^r)^{r-1}}} = 0 \rightarrow F x^r (r - x) = 0$$

$$x = r$$

(4) in

129) 1, 2, 9, 11, 22, 22, 29, 47 (د) عزیز

(1, 2) (9), ∞ \square ∞ , 29, (47, 2a+1)

$a, a, 11, 22, 22 \rightarrow \bar{x} = \frac{47+22}{2} = 34.5$

$\bar{x} = \frac{2a+47}{2} = 34.5 \rightarrow a = 22$

130) گ / و / ه / ن / ک / ل / ی عزیز (ب)

گ / و / ه / ن / ک / ل / ی = $4! \cdot 3! = 144$

131) 1 - $\left(\frac{1}{15} + \frac{1}{15}\right) = \frac{9}{15}$ عزیز (ب)

132) $(A \cap B, A \cap \bar{B})$ یا $(A \cap B, \bar{A} \cap B)$
 $\left(\frac{4}{15} \times \frac{4}{15}\right) + \left(\frac{4}{15} \times \frac{8}{15}\right) + \left(\frac{4}{15} \times \frac{8}{15}\right) = \frac{9}{15} = \frac{3}{5}$ عزیز (ب)

(134)

$m_{AC} \times m_{BD} = -1$
 $x = \frac{1}{r} \Rightarrow x = \frac{r}{r}$
 $m_{AB} = \frac{1}{r}$
 $y = -rx + \frac{r}{r}$

(135)

$\Delta ABF \sim \Delta CEF$
 $\Rightarrow \frac{r}{y} = \frac{r}{r+y} \Rightarrow r = y$
 $AF = 15$

(136)

$\alpha = \alpha \rightarrow$ (line), D
 $\beta = 11 - \beta \rightarrow \beta = \alpha, \omega$
 $\Rightarrow \frac{r + \alpha, \omega}{r + 11} = \frac{\alpha, \omega}{r} \rightarrow r = \frac{11}{4}$

(137)

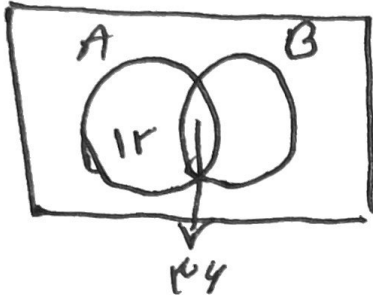
$B = \frac{\frac{r}{\sqrt{r}} + \sqrt{1r}}{\frac{1}{\sqrt{r}} + \sqrt{1r}} = \frac{\sqrt{r} + \sqrt{r}\sqrt{r}}{r\sqrt{r} + \sqrt{r}\sqrt{r}} = \frac{\sqrt{r+1} \times \sqrt{r-1}}{\sqrt{r+1} \times \sqrt{r-1}} = \frac{r - r\sqrt{r}}{-9}$
 $\rightarrow rB + 1 = r \left(\frac{1 - \sqrt{r}}{-r} \right) + 1 = -1 + \sqrt{r} + 1 = \sqrt{r}$

137

$$n(A \cup B) - n(A \cap B) = n(A - B) + n(B - A)$$

$$25 - 12n(A - B) = n(A - B) + \frac{12}{7}n(A - B)$$

$$n(A - B) = 12 \rightarrow n(A \cap B) = 12$$



$$n(A) = 24$$

جواب

138

$$a_1, a_2, a_3, \dots, a_n \quad d = a_2 - a_1 \rightarrow a_n = a_1 + (n-1)d$$

$$a_1 + k, a_2 + k, \dots \rightarrow a_n = a_1 + k + (n-1)d$$

انسانی صورت

جواب

139

$$\forall x=1 \rightarrow r + ka = a + \omega \rightarrow a = r \quad \text{جواب}$$

$$f(x) = \begin{cases} \sqrt{x^2 + k} + ka; & -1 \leq x \leq 1 \\ kx^2 + \omega; & x \leq -1 \text{ or } x \geq 1 \end{cases} \rightarrow f(k) = 12$$

140

$AP \perp PQ$ $k\gamma + k\lambda = 9$ $A \in \text{circle} \rightarrow 9 + k^2a = C$

$m_{AP} = \frac{k}{r} \rightarrow \frac{-\frac{a}{r} - k}{-\frac{k}{r}} = \frac{k}{r} \rightarrow a = \frac{k}{r}$

جواب