

$$f(n) = \frac{1 + r \cos \theta}{r - \cos \theta} = \frac{(1 + r \cos \theta)(1 + \cos \theta - r \cos \theta)}{(r - \cos \theta)(1 + \cos \theta - r \cos \theta)}$$

(طالع)
 6 بهار
 15 بهار

$$\frac{1 + r \cos \theta - r \cos \theta}{r - \cos \theta} = \frac{1 - r \cos \theta}{r - \cos \theta}$$

$$\frac{r(1 - \cos \theta)}{r - \cos \theta} = r + \frac{\cos \theta}{r - \cos \theta}$$

$$g(n) = \frac{r}{r - \cos \theta} \rightarrow g'(n) = \frac{-r \sin \theta}{(r - \cos \theta)^2} = -r \sin \theta \frac{1}{r}$$

$$\rightarrow \frac{-1}{r + \frac{1}{r} + r \cos \theta}$$

$$f'\left(\frac{r}{4}\right) \rightarrow \left(r + \frac{r \sin r}{r - \cos r}\right)' \rightarrow 0 + r \sin(r - \cos r) + \frac{\sin(r - \cos r)}{(r - \cos r)^2}$$

اردو سوال

$$\frac{-r \times \frac{1}{r} \left(r + \frac{r}{r}\right) - \frac{1}{r} \left(\frac{r}{r}\right)}{\left(r - \frac{r}{r}\right)^2}$$

$$\frac{-r - \frac{r}{r} - \frac{r}{r}}{r + \frac{r}{r} - r \frac{r}{r}}$$

$$\frac{-r - \frac{r}{r} - \frac{r}{r}}{r + \frac{r}{r} - r \frac{r}{r}} = \frac{(-1)}{r + \frac{r}{r} + r \frac{r}{r}} \quad \text{D}$$

$$y = ax + r$$

سوال ۴

$$f(x) + f'(x) = -1$$

$$f'(x) = -a$$

$$f(x) = -ax + r$$

$$-ax + r - a = -1 \rightarrow -ax = -r - 1 \quad a = \frac{r}{2}$$

$$f'(x) = -\frac{r}{2}$$

$$\frac{a_n - 1}{r_{n+1}} = \frac{n+1}{v}$$

↓

$$v(a_n - 1) = (n+1)(r_{n+1}) \rightarrow v a_n - v = r_{n+1} + 19n + v$$

$$r_{n+1} + (19 - va)r + 1r = 0$$

$$0 = (19 - va)r = 19r - va r$$

$$(19 - va)r = 1r \rightarrow 19 - va = \pm 1r$$

$$va = 19 - 1r \rightarrow va = 18 \rightarrow a = \frac{18}{v}$$

$$a = \frac{18}{v} \rightarrow \frac{-(19 - va)}{r + r} = -\frac{1r}{4} = -\frac{1}{4}r$$

$$a = 18 \rightarrow \frac{-(19 - va)}{r + r} = -\frac{(-1r)}{4} = \frac{1}{4}r$$

$$f(x) = x^2 + ax + b$$

$$x^2 + a = 0 \rightarrow x(x) + a = 0 \rightarrow a = -15$$

Gdb

$$\begin{array}{|c} f' = 0 \\ f(x) = 0 \end{array}$$

$$1 - x^2 + b = 0 \quad | \quad b = 14$$

$$b - a = 14 \rightarrow (-15) = 14$$

$$y = \frac{\Gamma_{n+1}}{\Gamma_{n-1}} \rightarrow \Gamma_{n+1} = y \Gamma_n - y$$

(Ans)

$$\Gamma_n - y \Gamma_n = -y - 1$$

$$\Gamma_n (1-y) = -(y+1) \rightarrow \Gamma_n = \frac{y+1}{y-1} \rightarrow n = \left(\frac{y+1}{y-1} \right)^r$$

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

$$f^{-1}(n) = \left(\frac{n+1}{n-1} \right) \left(\frac{-r}{(n-1)^r} \right)^B = - \frac{r(n+1)}{(n-1)^r} \rightarrow \frac{-r(r+1)}{(r-1)^r} =$$

(-15)

سوال ۹

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

$$\ln a - \ln = -1 \rightarrow a = \left(-\frac{1}{e}\right)$$

تک
سنگ

$$x = -\ln a = 1 \quad a = -\frac{1}{e}$$

$$f'(x) = \ln(x+1)^{\ln(x)} \cdot \left(-\frac{1}{x} + 1\right) - \frac{\ln(x+1)}{x}$$

$$f'(-\ln a) = f'(1) = \ln e^{\ln e} \cdot \left(-\frac{1}{e} + 1\right) - \frac{\ln e}{e} = 1 - \frac{1}{e} \quad \ln$$

سوال 1.

$$f(x) = \sin x \cos x$$

$$\frac{f\left(\frac{\pi}{2}\right) - f\left(\frac{\pi}{4}\right)}{\frac{\pi}{2} - \frac{\pi}{4}} = \frac{1(-1) - \frac{\sqrt{2}}{2}}{\frac{\pi}{4}}$$

$$= -\frac{\frac{\sqrt{2}}{2}}{\frac{\pi}{4}}$$

$$\frac{g\left(\frac{\pi}{2}\right) - g\left(\frac{\pi}{4}\right)}{\frac{\pi}{2} - \frac{\pi}{4}} = \frac{(1-0) - \left(\frac{1}{2} - \frac{1}{4}\right)}{\frac{\pi}{4}} = \frac{\frac{3}{4}}{\frac{\pi}{4}}$$

$$= \frac{-\frac{\sqrt{2}}{4}}{\frac{\pi}{4}} = -1$$