

(۰) (۲)

$$m = \frac{0-1}{2-0} = \left(\frac{-1}{2}\right)$$

$$f'(c) = \frac{1}{2}$$

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(-1) (۲)

$$m \frac{dy}{dx} = \frac{1}{2}$$

$$y' = -\frac{1}{2}x + \frac{1}{2} \Rightarrow -\frac{1}{2}x + \frac{1}{2} = \frac{1}{2} \Rightarrow -\frac{1}{2}x = 0 \Rightarrow x = 0 \Rightarrow f(0) = 1$$

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$$m = \left(\frac{2}{3}\right)$$

$$\frac{1+2+1}{3} = 1$$

$$f(2) - f(1) = 4 - 1 = 3 \Rightarrow m = 3$$

$$\frac{(n+m)(n+c) - (n^{r+m+1})}{(n+c)^2} = \frac{(r+m)c - (r+m)}{2n} = \frac{r}{2}$$

$$\frac{(n+c)^2}{r+m+1} = \frac{r}{2}$$

$$12 = r+m+1 \Rightarrow 4 = r+m \Rightarrow m = 3$$

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$$f'(u) - f'(u) = \frac{u - 9 \sin u}{9 - \sin^2 u} - \frac{2u - \sin^2 u}{9 - \sin^2 u} = \frac{\sin^2 u - 9 \sin u}{9 - \sin^2 u} = -\sin u$$

$$f'(u) - f'(u) = -\cos u$$

$$\cos \frac{2\pi}{3} = \left(-\frac{1}{2}\right)$$

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$$f'(x) = \frac{1}{\sqrt{1-x^2}} \Rightarrow \frac{1}{\sqrt{1-x^2}} \cdot \frac{1}{\sqrt{1-x^2}} = \frac{1}{1-x^2}$$

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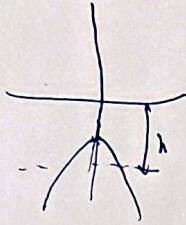
$$g(x) = \frac{f(x) - 1}{x}$$

$$\lim_{x \rightarrow 0} g(x) = \frac{0}{0}$$

$-x \alpha \mid \alpha \frac{1}{x}$

$$\stackrel{\text{Hop}}{=} \frac{(-1 + \sin x)}{(1 + \sin x)} \cos x \left(\frac{1}{(1 + \sin x)^2} \right) \approx \textcircled{-1}$$

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$$\begin{aligned} \sin x - \cos x &= -1 \\ -\sin^2 x &= -1 \quad \textcircled{x = \frac{1}{2}} \\ \left(\frac{1}{2}\right)^2 &= 1 \\ h &= \frac{1}{4} + 1 = \textcircled{\frac{5}{4}} \end{aligned}$$

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$$\frac{f(x) + \dots}{x \sqrt{x}}$$

$$4x^{\frac{1}{2}} + 4x^{\frac{3}{2}} \rightarrow f(x) = 10x^{\frac{1}{2}} + x^{-\frac{1}{2}}$$

$$x \sqrt{f(x)} = \textcircled{f(x)}$$

$$\frac{4x^{\frac{1}{2}} + 4x^{\frac{3}{2}}}{x} = 10x^{\frac{1}{2}} + x^{-\frac{1}{2}}$$

$$\Rightarrow 4 \cdot 2x^{\frac{1}{2}} + 2x^{\frac{1}{2}} =$$

$$\begin{aligned} x \sqrt{x} &= x^{\frac{3}{2}} \\ x^{\frac{3}{2}} (f(x) - 1) &= \dots \end{aligned}$$

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$$f(x) = \frac{(-x^2 + x + 1)}{\sqrt{x}} \cdot f(x)$$

$$\frac{\sqrt{x}}{-x^2 + x + 1} = \textcircled{\frac{1}{2}}$$

$$4x^2 - x - 1 = 0$$

$$x = \frac{1 \pm \sqrt{17}}{8} \rightarrow \text{as } \frac{1 + \sqrt{17}}{8}$$

$$-2x^2 \sqrt{x} + x \sqrt{x} + \sqrt{x} = \frac{-(-x^2 + x + 1)}{\sqrt{x}} \Rightarrow -2x^2 + (x^2 + x) = -x^2 + (x + 1) = \dots$$

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

$$\textcircled{\frac{1}{3}}$$

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