



$$y = ax + 1 \Rightarrow ra + 1 = 2 \Rightarrow ra = 1 \Rightarrow a = \frac{r}{r}$$

$f'(x) = \frac{r}{r}$ مستقیم تابع مماس است
بالی خط مماس

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

$$\frac{1}{r}x + b \Rightarrow \frac{1}{r}(r) + b = 2 \Rightarrow \frac{r}{r} + b = 2 \Rightarrow b = \frac{r}{r}$$

$$y = \frac{1}{r}x + \frac{r}{r}$$

$$ry - rx = n \Rightarrow ry = rx + n \Rightarrow y = \frac{r}{r}x + \frac{n}{r}$$

$$\frac{(rx+n)(x+r) - ((x^2+mx+1)(\cancel{r}))}{(x+r)^2} = \frac{((r+m)x+r) - (\cancel{r}x+m)}{14} = \frac{r}{r}$$

$$\frac{r+rm}{14} = \frac{r}{r} \Rightarrow r+rm = 14 \quad f(x) = \frac{x^2+rx+1}{x+r} \stackrel{x=1}{=} \frac{1}{r} = 1 \quad m+n = 1+r = r$$

$$14m = 14 \Rightarrow m = 1 \quad \frac{r}{r}(1) + \frac{n}{r} = 1 \Rightarrow n = 1$$

$$r'g'(\frac{\sin x}{r}) - f'(\frac{\sin x}{r})$$

$$f(x) = \frac{r - \sin^2 x}{r - \sin^2 x} \Rightarrow f'(x) = \frac{(r \cos^2 x (r - \sin^2 x)) - (-r \cos^2 x (r - \sin^2 x))}{(r - \sin^2 x)^2}$$

$$g(x) = \frac{r}{r + \sin^2 x} \Rightarrow g'(x) = \frac{0 - (r \times \cos^2 x)}{(r + \sin^2 x)^2} = \frac{-r \times \frac{1}{r}}{r - \sin^2 x + \frac{1}{r}}$$

$$g(x) = \frac{1}{r x^2} \Rightarrow g'(x) = \frac{-10x^3}{r^2 x^4} = \frac{-10}{r x^2} = \frac{-10}{r \times \frac{1}{\sqrt{r}}} = \frac{-10}{r \sqrt{r}} = \frac{-10}{r \sqrt{r}}$$

$$f(x) = \frac{1}{\sqrt{r x}} \Rightarrow f'(x) = \frac{-\frac{1}{2}}{\sqrt{r x^3}} = \frac{-\frac{1}{2}}{\sqrt{r} \sqrt{x^3}} = \frac{-\frac{1}{2}}{\sqrt{r} \times \sqrt{r x^3}} = \frac{-\frac{1}{2}}{\sqrt{r} \times \sqrt{r} \sqrt{x^3}} = \frac{-\frac{1}{2}}{r \sqrt{x^3}}$$

$$g'(x) f'(x) = \frac{-10}{r \sqrt{r}} \times \frac{-\frac{1}{2}}{r \sqrt{x^3}} = \frac{10}{4 r \sqrt{r} \times \sqrt{x^3}} = \frac{10}{4 r \sqrt{r} \sqrt{x^3}}$$

ریاضی

$$y = -x^2 - 1$$

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

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

$$g(x) = \frac{1}{\sqrt{x^2 - 1}} = \frac{1}{\sqrt{\frac{\omega}{r} - \frac{1}{r}}} = \frac{1}{\sqrt{\frac{\omega - 1}{r}}} = \frac{1}{\frac{\sqrt{\omega - 1}}{\sqrt{r}}} = \frac{\sqrt{r}}{\sqrt{\omega - 1}}$$

$$(f \circ g)' \left(\frac{\sqrt{\omega}}{r} \right) = f' \left(\frac{\sqrt{\omega}}{r} \right) \times f' \left(g \left(\frac{\sqrt{\omega}}{r} \right) \right) = \sqrt{\frac{r}{\omega - 1}}$$

$r \times r = r^2$

$$f'(r^+) = (r^2)^r = 1 \times r^r \Rightarrow r^r \times r^r$$