

$$(f \circ g)'(-\sqrt[3]{r}) = g'(-\sqrt[3]{r}) \times f'(g(-\sqrt[3]{r})) \Rightarrow x = -\sqrt[3]{r} \quad (5)$$

$$\Rightarrow \begin{cases} f(x) = \frac{1}{\sqrt[3]{rx}} \\ g(x) = \frac{1}{rx^3} \end{cases}$$

$$f(g(x)) = f\left(\frac{1}{rx^3}\right) = \frac{1}{\sqrt[3]{\frac{r}{rx^3}}} = x \Rightarrow (f \circ g)' = (x)' = 1$$

$$g\left(\frac{r}{\sqrt{\lambda}}\right) = \frac{1}{\sqrt[3]{\frac{r}{\lambda} - 1}} = r \Rightarrow (f \circ g)' \left(\frac{r}{\sqrt{\lambda}}\right) = g'\left(\frac{r}{\sqrt{\lambda}}\right) \times f'(r) \quad (10)$$

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

$$\Rightarrow g'\left(\frac{r}{\sqrt{\lambda}}\right) = \frac{-2 \times \frac{r}{\sqrt{\lambda}}}{3\sqrt[3]{\left(\frac{1}{\lambda}\right)^4}} = \frac{-14}{\sqrt{r}} = -14\sqrt{r}$$

$$f(x) = (rx)^2 + 1 \Rightarrow f'(x) = 4rx \Rightarrow f'(r) = 4r$$

$$\stackrel{I}{\Rightarrow} (f \circ g)' \left(\frac{r}{\sqrt{\lambda}}\right) = -14\sqrt{r} \times 4r = -14 \times 4\sqrt{r} \times r$$

سب سے برابر ہے!

$$\lim_{h \rightarrow 0} \frac{f^2(a-h) - 3f(a-h) + 2}{h(a-h)} = \lim_{h \rightarrow 0} \frac{(f(a-h) - 1)(f(a-h) - 2)}{h(a-h)}$$

$$f(a) = 1 \times \sqrt[3]{\lambda} = r \Rightarrow \lim_{h \rightarrow 0} \frac{f(a-h) - 1}{a-h} \times \lim_{h \rightarrow 0} \frac{f(a-h) - 2}{h} = \frac{f(a-h) - 2}{h} \times \lim_{h \rightarrow 0} \frac{f(a-h) - r}{h}$$

$$= \frac{r-1}{a} \times \lim_{h \rightarrow 0} \frac{f(a+(a-h)) - f(a)}{h} = -\frac{1}{a} \lim_{h \rightarrow 0} \frac{f(a+(a-h)) - f(a)}{(a-h)} = -\frac{1}{a} f'(a)$$

$$f(x) = (x-r)\sqrt[3]{x+r} \Rightarrow f'(x) = 1 \times \sqrt[3]{x+r} + \frac{x-r}{\sqrt[3]{(x+r)^2}} \Rightarrow f'(a) = \sqrt[3]{\lambda} + \frac{1}{\sqrt[3]{4r}} = r + \frac{1}{14}$$

$$\Rightarrow \frac{r\omega}{14} \Rightarrow -\frac{1}{a} f'(a) = -\frac{1}{a} \times \frac{r\omega}{14} = -\frac{\omega}{14}$$

- فرضیه

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$$4y = 4x + 1 \Rightarrow y = \frac{4}{4}x + \frac{1}{4} = \frac{1}{4}x + \frac{1}{4} \Rightarrow \text{شیب} = \frac{1}{4} \quad (10)$$

$$\text{شیب خط مماس} = -2$$

$$y = x^2 - 4x + 5 \Rightarrow y' = 2x - 4 = -2 \Rightarrow x = 1 \Rightarrow y = 1 - 4 + 5 = 2 \Rightarrow \begin{cases} x = 1 \\ y = 2 \end{cases}$$