

(1) تابع در نقطه مشتق پذیر است پس تابع در یک مشتق پذیر باشد

$$1 \leq b \quad \text{و} \quad f'(1) = \frac{b}{3} \Rightarrow b \geq 3, \quad a \leq \frac{1}{2} \Rightarrow a+b \geq \frac{5}{2}$$

$$f'(1) = 1$$

$$f'(x) = \frac{x(\sqrt{x} - (1-x)(\frac{1}{\sqrt{x}}))}{\sqrt{x}} \quad (2)$$

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

$$\frac{1}{a} = ab \circ c \Rightarrow f(a) \rightarrow \frac{1}{a^2} = b \Rightarrow \frac{1}{a} = \frac{1}{a} \circ c \quad (3)$$

$$\Rightarrow \frac{1}{a} = c \Rightarrow \underline{ac = 1}$$

$$f'(x) = m(n-a)^{m-1} \neq 0 \Rightarrow m \neq 0 \Rightarrow \underline{1 \leq m}$$

$$g' \circ f(g) : (fg)' = f'ag' \Rightarrow (4)$$

$$f'(x) - f'(x) = 1 \Rightarrow -a(-d-xa) = 1 \Rightarrow a = -\frac{1}{x} \Rightarrow f'(x) = \frac{1}{x}$$

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

$$(fg)' = f' \times g' \quad \text{و} \quad g(\frac{1}{x}) = 1 \Rightarrow g'(\frac{1}{x}) = f'(x) = -\frac{1}{x^2} \quad (5)$$

$$\Rightarrow g' = (x^2-1)^{-\frac{1}{2}} = -\frac{1}{2}(x) (x^2-1)^{-\frac{3}{2}}$$

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

$$\frac{-\frac{1}{2} x^2 \sqrt{x^2-1}}{-x^2 \sqrt{x^2-1}} = (6)$$

$$g' = f'(uol) + f''(uol)$$

$$g'(u) = f'(u) + f''(u) = \frac{f(u)}{u} = \boxed{f}$$

$\downarrow$
 $f'(u), f''(u)$

$$\text{Hop, } -f_a f'(0-h) f(0-h) + f' f'(0-h)$$

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$$g = \frac{f(u)}{u} \rightarrow n = \frac{1}{u} \xrightarrow{u \rightarrow 0} n = -1$$

(1)

$$f' = n - f$$

$$\rightarrow n - f - 1 \rightarrow n = 1$$

$g = 1$