

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

$$f(x) = -ax - a \Rightarrow -\frac{x}{a} - \frac{a}{a} = -\frac{x+a}{a}$$

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

$$\frac{f(x)}{f'(x)} = \frac{-x(-\frac{1}{x}) - a}{+\frac{1}{x}} = \frac{+1 - \frac{1}{x}}{+\frac{1}{x}} = \boxed{-\frac{1}{x}}$$

$$(f(g(x)))' = g'(x) \cdot f'(g(x))$$

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

$$g(\frac{x}{\sqrt{x}}) = \frac{1}{\sqrt{\frac{x}{x}}} = \boxed{1}$$

$$f'(x) \Rightarrow f(x) = (2x)^2 + 1 = 4x^2 + 1 \rightarrow f'(x) = 8x \rightarrow \boxed{4x}$$

$$\frac{(4x)(-\frac{1}{2\sqrt{x-1}})}{-1 \times \frac{1}{2\sqrt{x-1}}} = \boxed{+2}$$

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

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

$$f(x) = f(x \pm nT) \rightarrow f'(x) = f'(x \pm nT)$$

$$m \in \mathbb{Z}$$

$$\rightarrow f'(-1) = f'(1) \rightarrow g'(-1) = 1 + 1 = \boxed{2}$$

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

$$f'(x) = (1) \sqrt{x+1} + \frac{1(x-1)}{x \sqrt{(x+1)^2}} \Rightarrow \boxed{-\frac{1}{2} \times \frac{1}{12} = -\frac{1}{24}}$$

$$xy = x+1 \rightarrow y = \frac{1}{x} + \frac{1}{x} \rightarrow a = \frac{1}{x} \rightarrow \frac{1}{a} = x \rightarrow f'(a) = -\frac{1}{a^2}$$

$$f'(a) = \frac{1}{x-1} \rightarrow f'(a) = \frac{1}{a-1} = -\frac{1}{a} \rightarrow a = 1 = x$$

$$x=1, y=1-1+1=1 \quad \text{نقطه } (1, 1)$$