

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

سوال ۱۰: یک برابر \sqrt{x} است

$$f(x) = (x[x])^n \quad g(x) = \frac{1}{\sqrt{x^2-1}} \rightarrow f \circ g(x) = \left(\frac{1}{\sqrt{x^2-1}}\right)^n \rightarrow f \circ g'(x) = \frac{-2n}{(x^2-1)^n \sqrt{x^2-1}} \rightarrow f \circ g'\left(\frac{\sqrt{5}}{2}\right) = \frac{-2\sqrt{5}}{\frac{1}{16} \cdot \frac{1}{2}} = -4\sqrt{5}$$

$\downarrow x = \frac{\sqrt{5}}{2} \text{ است}$
 $f(x) = x^n$