

$$f(a) = \begin{cases} a^2 + 2a \\ a^2 - 4 \end{cases} \rightarrow a^2 + 2a = a^2 - 4$$

$$2a = -4 \Rightarrow a = -2$$

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$$f(2) = \frac{f+a}{f-b} = 3 \quad \Rightarrow \quad \frac{f+a}{a} = 3 \Rightarrow a = 11$$

$$g(2) = f+b = 3 \Rightarrow b = -1$$

$$f(n) = \frac{n^2 + 11}{2n + 1} \xrightarrow{n=1} f(1) = \frac{12}{2} = 6$$

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$$\begin{aligned} n=1 &\rightarrow 1 - a + b = 0 \\ n=2 &\rightarrow 4 + 2a + b = 0 \end{aligned}$$

$$\begin{aligned} -1 + a - b &= 0 \\ 4 + 2a + b &= 0 \\ \hline 3 + 3a &= 0 \end{aligned}$$

$$\begin{aligned} a &= -1 \\ 2 + 2 + b &= 0 \Rightarrow b = -4 \end{aligned}$$

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$$f(n) = \frac{fn + 1}{2n^2 - 5n - 2}$$

$$f(1) = \frac{a}{-12}$$

$$\Delta = 0 \quad a^2 + 16b = 0 \quad \text{نسبت متغیر} = \frac{-b}{2a} \rightarrow \frac{-a}{-2} = -1 \Rightarrow a = -2$$

$$2a + 16b = 0 \Rightarrow b = \frac{-2a}{16} = -\frac{a}{8}$$

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$$\Delta < 0 \quad m^2 - 4 < 0$$



$$(-2, 2)$$

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