

$f(n) = 2n^2 - 2n \rightsquigarrow 2(n^2 - 2n) \rightsquigarrow 2(n^2 - 2n + 1 - 1) \rightsquigarrow 2((n-1)^2 - 1) \rightsquigarrow f(n) = -\frac{1}{2}$ $\sin \frac{\pi}{4} + \cos \frac{\pi}{4} \rightsquigarrow \frac{\sqrt{2}}{2} + 1$	۶
$f(n) = \frac{n+1}{n-1}$ $\rightsquigarrow f(a) = \frac{a+1}{a-1} \rightsquigarrow \frac{\frac{a+1}{a-1} + 1}{\frac{a+1}{a-1} - 1} \rightsquigarrow \frac{\frac{2a}{a-1}}{\frac{2}{a-1}} \rightsquigarrow a$ تعیین می‌کنیم که آیا a به چه اشیاء منتهی می‌شود و متغیری که برقرار است	۷
$f(n) = n^2 - 2n$ $g(n) = \sqrt{n^2 - 1}$ $f(p) = -2 \rightsquigarrow p^2 - 2p + 2 = 0 \rightsquigarrow (p-1)^2 = 0 \rightsquigarrow p = 1$ $\rightarrow g(a) = 1 \rightarrow \sqrt{a^2 - 1} = 1 \rightarrow a^2 - 1 = 1 \rightarrow a^2 = 2 \rightarrow a = \pm \sqrt{2}$	۸
$f(n+3) = n^2 - 6n + 4$ $\left. \begin{aligned} n+3 = 2 &\rightsquigarrow n = -1 \rightarrow 1 - 6 + 4 = -1 \\ n+3 = -2 &\rightsquigarrow n = -5 \rightarrow 25 - 30 + 4 = -1 \end{aligned} \right\} \rightarrow 2 \times 12 = 24$	۹
$f(\epsilon \cos^2 n + 2 \cos n) = \tan^2 n$ $\rightarrow \epsilon \cos^2 n + 2 \cos n = \frac{1}{\epsilon} \rightarrow 1 \cos^2 n + 1 \cos n - \frac{1}{\epsilon} = 0 \rightsquigarrow \frac{-1 \pm \sqrt{1 + 4/\epsilon}}{2}$ نتیجه ۶ سوال پس چون که کمتر از ۱ می‌شود $\rightsquigarrow \tan^2 n = \frac{39 + 4\sqrt{2}}{49}$	۱۰

