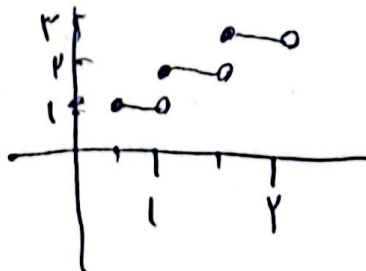


$D_f = \{1, 2, 3, 4, \dots, 9\}$ $f(n) = -\frac{1}{9} \times (1+2+3+\dots+9) + 9 \times 10$ $\rightarrow \sum_{n \in D_f} f(n) = -\frac{1}{9} \times \frac{9 \times 10}{2} + 9 \times 10 = -15 + 90 = \underline{75}$	۶
چون $a=0$ پس تابع در $x=0$ از هر طرف یکسان نیست پس $b > 0$ ، $-\frac{c}{b} = 2 \rightarrow -2b = c$ $\leftarrow$ شیب خط مماس در $x=0$ برابر 2 است $f(n) = \sqrt{bn - 2b} \rightarrow f(2) = 1 = \sqrt{2b - 2b} \rightarrow b = 1 \rightarrow c = -2$ $g(n) = \sqrt{n^2 + 4} \rightarrow D_f = [2, +\infty)$	۷
$f(n) = \frac{n(n-2)(n+2)}{(n+2)} \sim n \neq -2 \sim f(n) = n^2 - 2n$ $n^2 - 2n = 1 \rightarrow \frac{n^2 - 2n - 1}{(n-2)(n+2)} = 0 \rightarrow n \neq \{-2, 2\} = \{a, b\}$ $\min f = \frac{-4}{4} = -1 \rightarrow c = -1 \rightarrow f\left(\frac{2}{-2}\right) = f(-1) = \underline{3}$	۸
$g = \sqrt{(n-x)^2} = \sqrt{n^2 - 2xn + x^2} = \sqrt{n^2 - 2xn + 1} \sim a = -2$ $b = 1$ $y = n - 2$ $D_f = [-2, 12] \rightarrow R_f = [-1, 10] \checkmark$	۹
$\frac{1}{9} \leq n < 1 : 0+1=1$ $1 \leq n < 1.5 : 1+1=2$ $1.5 \leq n < 2 : 1+2=3$ 	۱۰