

1) $d(n) \rightarrow \frac{1}{\sqrt{n}} \Rightarrow d(d(n)) \leq d(\sqrt{n}) \Rightarrow d^{-1} \rightarrow d(n) \leq \sqrt{n} \rightarrow \sqrt{n} \geq n + \sqrt{n} - r$
 $\sqrt{n} \geq n \rightarrow \textcircled{1} // d(d(n)) \Rightarrow n \in \mathbb{Q} \Rightarrow n \geq 0 \textcircled{2} / d(n) \in \mathbb{Q} \rightarrow n + \sqrt{n} - r \geq \dots \rightarrow t + t - r \geq \dots$
 $(t+r)(t-r) \geq \dots \rightarrow \frac{-r}{t-r} \rightarrow \sqrt{n} \in [1, 2] \rightarrow n \in [1, 4] \textcircled{3} / \textcircled{1} \cap \textcircled{2} \cap \textcircled{3} \rightarrow [1, 4] =$
 $\text{مجموعة } \sqrt{n}$

4) $\Rightarrow \dots \rightarrow x \rightarrow [1, 9] \rightarrow \textcircled{-1} \rightarrow [-1, 1] \rightarrow \sqrt{\dots} \rightarrow [1, r] \rightarrow \dots \rightarrow \sqrt{\dots}$
 $\max \rightarrow r - r' \Rightarrow \epsilon - \frac{1}{\epsilon} \rightarrow \frac{1}{\epsilon} \Rightarrow \min \rightarrow r' - r' \rightarrow \frac{1}{\epsilon} - r' \rightarrow -\frac{r'}{\epsilon}$
 $[-\frac{r'}{\epsilon}, \frac{1}{\epsilon}] \rightarrow \frac{1}{\epsilon} + \frac{r'}{\epsilon} = \frac{r'}{\epsilon}$

10) $d(n) = \frac{n - [n]}{r} \Rightarrow [-r, 1] \Rightarrow d(d(n)) \Rightarrow -r \rightarrow \frac{-r - r'}{r} \rightarrow \frac{1}{\epsilon} - \epsilon \rightarrow -\frac{1}{\lambda}$
 $\rightarrow -1 \rightarrow \frac{-1 - r'}{r} \rightarrow \frac{1}{\epsilon} - \frac{r'}{\epsilon} \rightarrow \frac{-r'}{\epsilon} \rightarrow -\frac{r'}{\lambda}$
 $\Rightarrow [-1, -\frac{r'}{\lambda}]$