

|                                                                                                                                                                                                                                                                                                                                                             |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <p>۱</p> <p>کشف</p> <p> <math>2 \geq x</math><br/> <math>2 - x \geq 0</math> (در یک طرف)<br/> <math>4 \geq \sqrt{2-x}</math> (در یک طرف)<br/> <math>4 \geq \sqrt{2-x}</math><br/> <math>x \geq -2</math> </p> <p> <math>\Rightarrow D_f = -2 \leq x \leq 2</math> </p>                                                                                      | ۱  |
| <p>۲</p> <p>کشف</p> <p> <math>x \geq 2</math><br/> <math>x - 2 \geq 0</math> (در یک طرف)<br/> <math>2 \geq \sqrt{x-2}</math> (در یک طرف)<br/> <math>4 \geq x-2</math><br/> <math>x \leq 11</math> </p> <p> <math>\Rightarrow D_f = 2 \leq x \leq 11</math> </p>                                                                                             | ۲  |
| <p>۳</p> <p>کشف</p> <p> <math>\sqrt{2} \geq x</math><br/> <math>2 \geq x^2</math><br/> <math>x \leq \sqrt{2}</math> </p> <p> <math>D_f = x \leq \sqrt{2}</math> </p>                                                                                                                                                                                        | ۳  |
| <p>۴</p> <p>کشف</p> <p> <math>2 x  - 9 \geq 0</math><br/> <math>2( x  - \frac{9}{2}) \geq 0</math><br/> <math>( x  - \frac{9}{2}) \geq 0</math><br/> <math> x  \geq \frac{9}{2}</math> </p> <p> <math>\Rightarrow D_f = \mathbb{R} - (-\frac{9}{2}, \frac{9}{2})</math><br/> <math>D_f = x \geq \frac{9}{2}</math> یا <math>x \leq -\frac{9}{2}</math> </p> | ۴  |
| <p>۵</p> <p>کشف</p> <p> <math> x  - 2 \neq 0 \Rightarrow x \neq \pm 2</math><br/> <math>D_f = \mathbb{R} - \{2, -2\}</math> </p>                                                                                                                                                                                                                            | ۵  |
| <p>۶</p> <p>کشف</p> <p> <math>\sqrt{x} - 2 \neq 0 \Rightarrow x \neq 4</math><br/> <math>x \neq 9</math><br/> <math>x \geq 0</math><br/> <math>D_f = \mathbb{R} - \mathbb{R} - \{4, 9\}</math><br/> <math>D_f = [0, \infty) - \{4, 9\}</math> </p>                                                                                                          | ۶  |
| <p>۷</p> <p>کشف</p> <p> <math> x  + 2 \neq 0 \Rightarrow</math> همیشه برقرار است<br/> <math>2 -  x  \geq 0 \Rightarrow 2 \geq  x </math><br/> <math>-2 \leq x \leq 2</math> </p> <p> <math>\Rightarrow D_f = [-2, 2]</math> </p>                                                                                                                            | ۷  |
| <p>۸</p> <p>کشف</p> <p> <math> x  - 1 \neq 0 \Rightarrow  x  \neq 1 \Rightarrow x \neq 1, -1</math><br/> <math>4 - x^2 \geq 0 \Rightarrow 4 \geq x^2 \Rightarrow -2 \leq x \leq 2</math> </p> <p> <math>\Rightarrow D_f = [-2, 2] - \{1, -1\}</math> </p>                                                                                                   | ۸  |
| <p>۹</p> <p>کشف</p> <p> <math>x +  x  \geq 0 \Rightarrow x \geq 0</math><br/> <math>D_f = \mathbb{R}^+</math><br/> <math>D_f = (0, \infty)</math> </p>                                                                                                                                                                                                      | ۹  |
| <p>۱۰</p> <p>کشف</p> <p> <math>x x  \geq 0 \Rightarrow x \geq 0</math><br/> <math>D_f = \mathbb{R}^+</math><br/> <math>D_f = (0, \infty)</math> </p>                                                                                                                                                                                                        | ۱۰ |



|                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| $2 - [x] \geq 0$<br>$2 \geq [x]$<br>$2 > x$                                                                                                                                                                                                                                                                                                                                                                        | $\left. \begin{aligned} D_f &= (-\infty, 2) \\ D_f &= \mathbb{R} - [2, \infty) \end{aligned} \right\}$                                                                                                                                                                                                                                                                                                                                                    | 6<br>(کف)  |
| $2 - [x] > 0$<br>$2 > [x]$<br>$2 > x$                                                                                                                                                                                                                                                                                                                                                                              | $\left. \begin{aligned} D_f &= (-\infty, 2) \\ D_f &= \mathbb{R} - [2, \infty) \end{aligned} \right\}$                                                                                                                                                                                                                                                                                                                                                    | 7<br>(کف)  |
| $x[x] \neq 0 \Rightarrow \left. \begin{aligned} x &\neq 0 \\ [x] &\neq 0 \end{aligned} \right\} \Rightarrow D_f = \mathbb{R} - [0, 1)$<br>اعداد یازده (۰، ۱) حذف شدند                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 8<br>(کف)  |
| $-x[x] > 0 \Rightarrow D_f = \emptyset$<br>(دو علامت مختلف در صورتی که یکی مثبت و دیگری منفی باشد)                                                                                                                                                                                                                                                                                                                 | $\left. \begin{aligned} [x - \frac{1}{x}] + [x + \frac{1}{x}] &\geq 0 \Rightarrow [x + \frac{1}{x}] \geq 1 \Rightarrow x + \frac{1}{x} \geq 1 \Rightarrow x \geq \frac{1}{x} \Rightarrow D_f = [\frac{1}{x}, \infty) \\ [x - \frac{1}{x}] + [-x + \frac{1}{x}] &\geq 0 \Rightarrow [\frac{1}{x} - x] = [-x + \frac{1}{x}] \Rightarrow x + \frac{1}{x} \in \mathbb{Z} \Rightarrow D_f = \{x   x = k\frac{1}{x}, k \in \mathbb{Z}\} \end{aligned} \right\}$ | 9<br>(کف)  |
| $2 \sin x - 1 \neq 0 \Rightarrow \sin x \neq \frac{1}{2} \Rightarrow D_f = \mathbb{R} - \{k\pi + \frac{\pi}{6}, k\pi - \frac{\pi}{6}\}$<br>$\cot x \neq 1 \Rightarrow \tan x \neq 1 \Rightarrow x \neq k\pi + \frac{\pi}{4} \cup x \neq k\pi - \frac{\pi}{4}$<br>$\tan x \neq \cos x \Rightarrow x \neq k\pi + \frac{\pi}{2} \Rightarrow D_f = \mathbb{R} - \{k\pi, k\pi + \frac{\pi}{2}, k\pi + \frac{3\pi}{2}\}$ | $\left. \begin{aligned} 2 \sin x - 1 \geq 0 \Rightarrow \sin x \geq \frac{1}{2} \Rightarrow x \in (2k\pi, 2k\pi + \pi) \\ D_f = \mathbb{R} - [2k\pi + \pi, 2k\pi] \\ x \in [\frac{\pi}{6}, \frac{5\pi}{6}] \\ 1 - 2 \cos x \geq 0 \Rightarrow \frac{1}{2} \geq \cos x \Rightarrow D_f = \mathbb{R} - (2k\pi - \frac{\pi}{3}, 2k\pi + \frac{\pi}{3}) \end{aligned} \right\}$                                                                               | 10<br>(کف) |

در برخی از سوالات از حالت دیگر دامنه نوشته ام