

$$\text{CWS} \quad x \neq 2 \xrightarrow{\text{CWS}} y+b=0 \\ b=-2$$

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$$\text{ا) } x(x^2-1) \geq 0 \quad \begin{array}{c} -\infty \quad -1 \quad 0 \quad 1 \quad +\infty \\ \hline - \quad + \quad - \quad + \end{array}$$

$$D_f = [-1, 0] \cup [1, +\infty)$$

$$\Rightarrow |x|-1 > 0 \\ |x| > 1 \begin{cases} x > 1 \\ x < -1 \end{cases}$$

$$D_f = (-\infty, -1) \cup (1, +\infty)$$

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$$\text{الف) } |x| - \lfloor x \rfloor \neq 0 \Rightarrow D_f = \mathbb{R} - [0, +\infty) \\ |x| \neq \lfloor x \rfloor$$

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$$\text{ب) } \sqrt{y} \leq -\sqrt{x+9} \rightarrow \begin{array}{l} x \leq 0, y \leq 11 \\ x \leq 1, y \leq 44 \\ x \leq 4, y \leq 9 \\ x \leq 9, y \leq 4 \end{array}$$

$$\begin{array}{l} x \leq 14, y \leq 20 \\ x \leq 20, y \leq 14 \\ x \leq 24, y \leq 9 \\ x \leq 29, y \leq 4 \end{array}$$

$$\Rightarrow D_f = \left\{ \begin{array}{l} 0, 1, 4, 9, \\ 14, 20, 24, 29 \\ 44, 11 \end{array} \right\}$$

$$\left\lfloor x - \frac{1}{x} \right\rfloor + \left\lfloor x + \frac{3}{x} \right\rfloor > 0 \xrightarrow{+2} \left\lfloor x + \frac{2}{x} \right\rfloor + \left\lfloor x + \frac{3}{x} \right\rfloor > 2 \Rightarrow$$

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$$2 \left\lfloor x + \frac{3}{x} \right\rfloor > 2 \Rightarrow \left\lfloor x + \frac{3}{x} \right\rfloor > 1 \Rightarrow x + \frac{3}{x} \geq 2 \rightarrow x \geq \frac{1}{x} \Rightarrow D_f = \left[\frac{1}{x}, +\infty \right)$$

$$1 - \log_{10}(x-a) \geq 0 \Rightarrow \log_{10}(x-a) \leq 1 \rightarrow x-a \leq 10 \\ x-a > 0 \rightarrow x > \frac{a}{y} \rightarrow b \quad x \leq \frac{10+a}{y} \rightarrow c$$

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$$\text{CWS} : c-b = \frac{10+a}{y} - \frac{a}{y} = \frac{10}{y} = d$$