

نام و نام خانوادگی زیر خط بنویس		پاسخنامه تشریحی تکلیف شماره ۵ کلاس دبیر نام و نام خانوادگی
ب) $\cos x - 1 \neq 0$ $\cos x \neq 1$ $x \neq 360^\circ, 0^\circ$ $D_f = \mathbb{R} - \{2k\pi + \frac{2\pi}{3}, 2k\pi + \frac{4\pi}{3}\}$	۱	ا) $2 \cos x + 1 \neq 0$ $2 \cos x \neq -1$ $\cos x \neq -\frac{1}{2}$ $x \neq 120^\circ, 240^\circ$ $D_f = \mathbb{R} - \{2k\pi + \frac{2\pi}{3}, 2k\pi + \frac{4\pi}{3}\}$
ب) $\cot x - 1 \neq 0$ $\cot x \neq 1$ $x \neq 45^\circ, 315^\circ$ $D_f = \mathbb{R} - \{2k\pi + \frac{\pi}{4}, 2k\pi + \frac{5\pi}{4}\}$	۲	ا) $\tan x + 1 \neq 0$ $\tan x \neq -1$ $x \neq 135^\circ, 225^\circ$ $D_f = \mathbb{R} - \{2k\pi + \frac{3\pi}{4}, 2k\pi + \frac{7\pi}{4}\}$
ب) $-1 \leq \sqrt{x} - 3 \leq 1$ $2 \leq \sqrt{x} \leq 4$ $4 \leq x \leq 16$ $D_f = \{4, 16\}$	۳	ا) $-1 \leq x^2 - 3 \leq 1$ $-2 \leq x^2 \leq 4$ $1 \leq x^2 \leq 3$ $1 \leq x \leq \sqrt{3}$ $D_f = \{1, \sqrt{3}\} \cup [-\sqrt{3}, -1]$
ب) $-1 \leq x^2 - 3x + 1 \leq 1$ $0 \leq x^2 - 3x + 2 \leq 2$ $0 \leq (x-1)(x-2) \leq 2$ $x \geq -1 \leq x \leq 2$ $D_f = \{-2, -4\} \cup \{2, 4\}$	۴	ا) $-1 \leq x - 3 \leq 1$ $2 \leq x \leq 4$ $x \geq 2$ $x \leq -2 \rightarrow D_f = \{-2, -4\} \cup \{2, 4\}$ $-4 \leq x \leq 4$
ب) $2 x > 0$ $2 > x $ $-2 < x < 2$ $D_f = \{-2, 2\}$	۵	ا) $x^2 - 4 > 0$ $x^2 > 4$ $x > 2, x < -2$ $D_f = (-\infty, -2) \cup (2, +\infty)$

$$\{m \in \mathbb{N} \mid \frac{m-1}{m} = x \mid x\} = \emptyset$$

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$$\frac{m-1}{m} = x \Rightarrow m-1 = mx \Rightarrow m(1-x) = 1 \Rightarrow m = \frac{1}{1-x}$$

$$m \in \mathbb{N} \Rightarrow \frac{1}{1-x} \in \mathbb{N} \Rightarrow 1-x = \frac{1}{n} \Rightarrow x = 1 - \frac{1}{n} = \frac{n-1}{n}$$

$$\frac{m}{m-1} = x \Rightarrow m = x(m-1) \Rightarrow m = xm - x \Rightarrow m(1-x) = -x \Rightarrow m = \frac{-x}{1-x}$$

$$\{x \in \mathbb{R} \mid \log x = x\}$$

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