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(فاطمه ماسمی)

«بہ نام خدا»

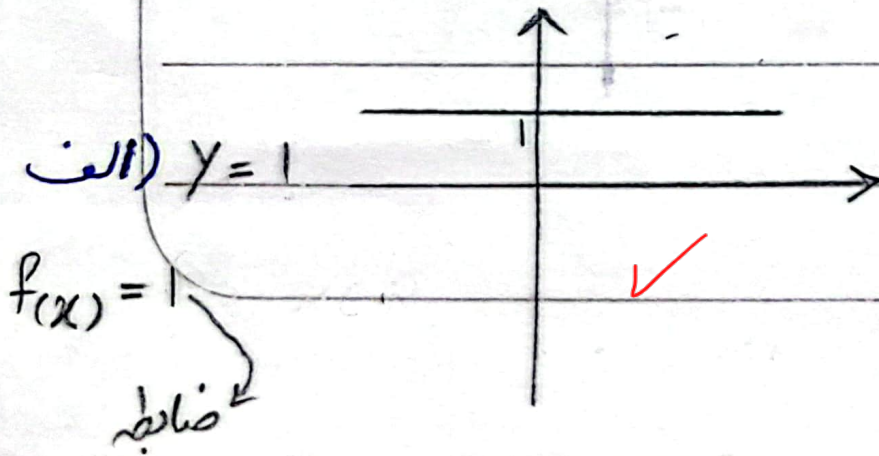
تکلیف شمارہ ۳

✓ الف) $y_1'' = 2x_1' + 2x_1 \quad x_1 = x_2 \rightarrow y_1'' = y_2'' \rightarrow y_1 = y_2$ ✓ تابع ①

✓ ب) $y_2'' = 2x_2' + 2x_2 \rightarrow x = 0 \rightarrow |y| = 2 \rightarrow y = \pm 2$ ✓ تابع ②

✓ ج) $\sqrt{x-1} + |y-2| = 0 \Rightarrow x-1=0 \quad |y-2|=0 \rightarrow f = \{(1, 2)\}$ ✓ تابع ③

✓ د) $x=0 \rightarrow \cos y = 0 \rightarrow y = \frac{\pi}{2}, \frac{3\pi}{2}$ ✓ تابع ④



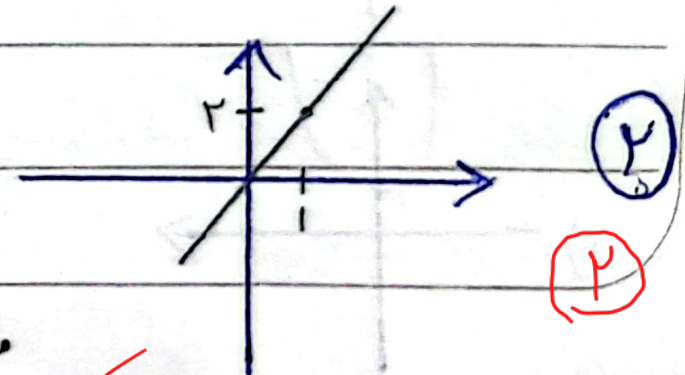
$a > 0$

ب) $y = ax + b$

$r = r + b$

$b = 0 \rightarrow$ مبدأ

ضابطہ $= f(x) = 2x$

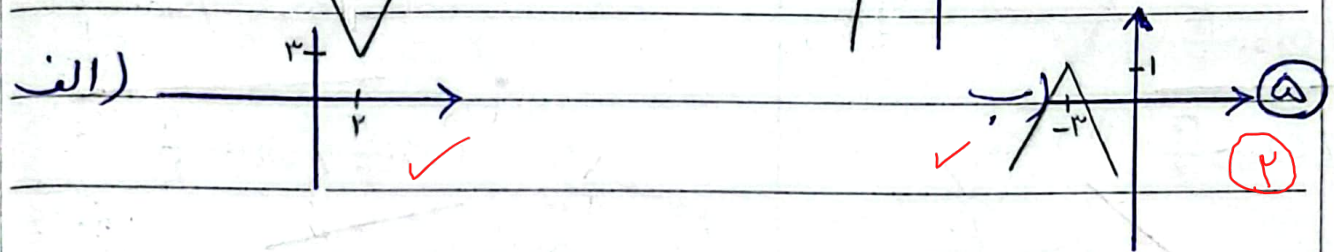
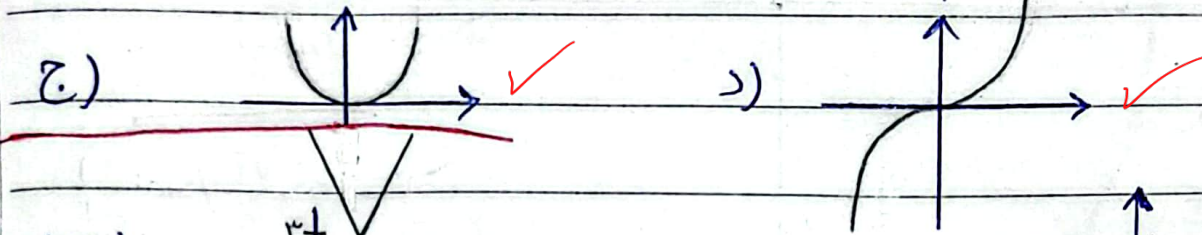
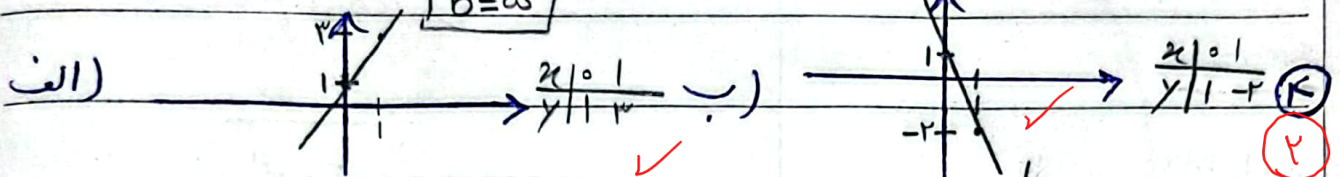


الف) $y = ax + b \rightarrow a = 1 \rightarrow a + rb = 1 + 0 = 1$
 $b = 0$

(2) (3)

ب) $-\frac{b}{ra} = r \rightarrow -b = ra \rightarrow b = -ra \rightarrow b = -1 \times 1 = -1 \rightarrow a = -r$
 $a + rb = -1 + (1 \times 1) = 0$

$y = ax^r + bx + c$
 $1 = r + (-r \times r) + b$
 $b = 1$



الف) $x^2 - 4x \neq 0 \rightarrow x(x - 4) \neq 0 \rightarrow x \neq 0 \rightarrow x \neq 4 \Rightarrow D_f = \mathbb{R} - \{0, 4\}$

ب) $4 - \frac{4 \times 1 \times 1}{-4} < 0 \Rightarrow$ مستندارد $D_f = \mathbb{R}$

ج) $1 - 4 \times 1 \times 1 < 0 \Rightarrow$ مستندارد $D_f = \mathbb{R}$

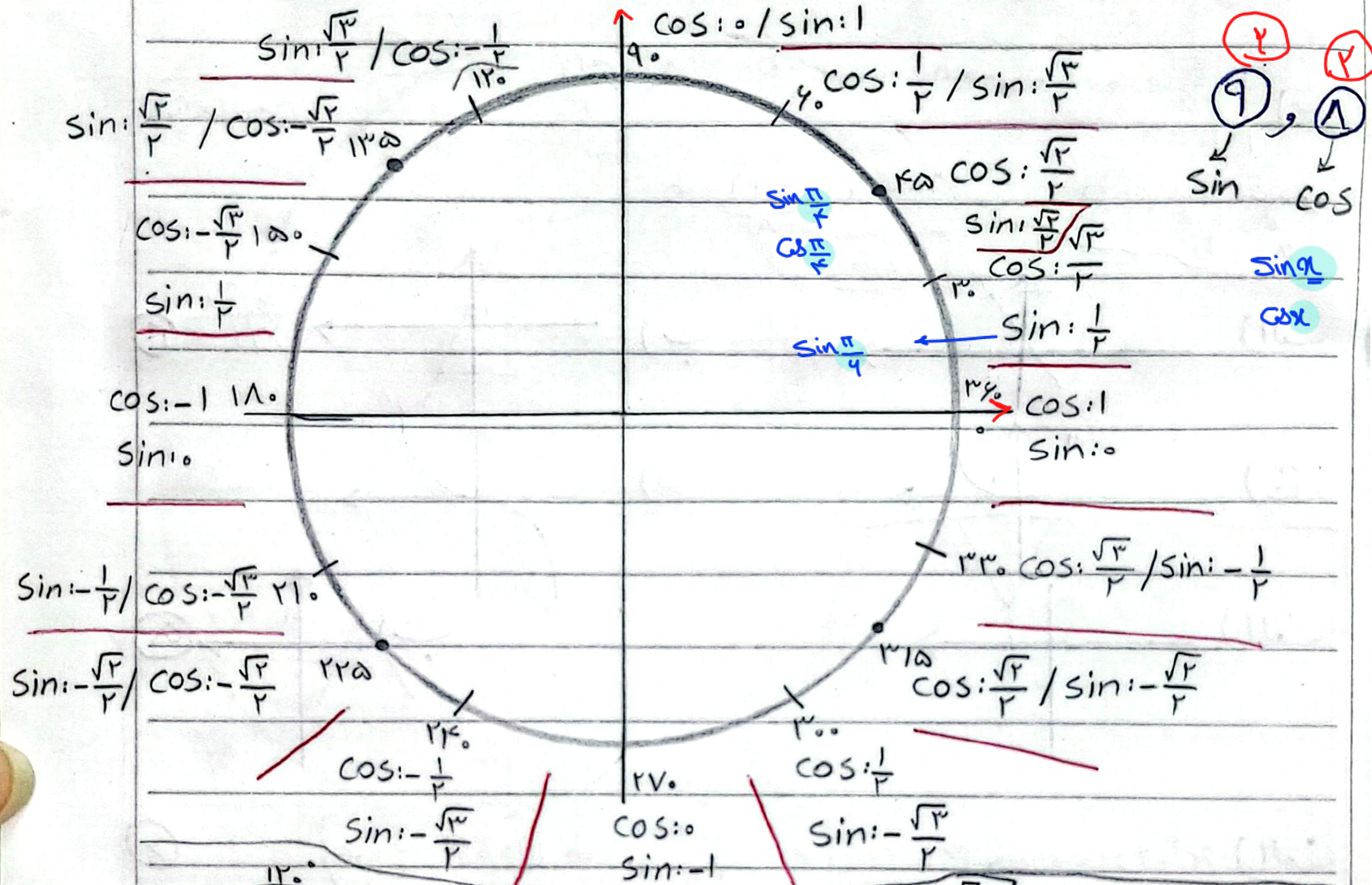
د) $x^2(x^2 - 4) = x^2(x - 2)(x + 2) \neq 0 \rightarrow x \neq 0 \rightarrow x \neq 2 \rightarrow x \neq -2 \Rightarrow D_f = \mathbb{R} - \{0, \pm 2\}$

الف) $4 - x > 0 \rightarrow x < 4$
 $x - 2 > 0 \rightarrow x > 2$
 $D_f = [2, 4]$
 $\boxed{4 > x} \cap \boxed{x > 2} \rightarrow 2 < x < 4$

ب) $x^2 + 1 > 0 \Rightarrow D_f = \mathbb{R}$

ج) $x - 2 > 0 \rightarrow x > 2$
 $x - 4 \neq 0 \rightarrow x \neq 4$
 $D_f = [2, +\infty) - \{4\}$

2) $|z| + z^r \geq 0 \Rightarrow |z| + z^r \neq 0 \Rightarrow z \neq 0 \quad D_f = \mathbb{R} - \{0\}$



الف) $\cos \frac{2\pi}{3} = -\frac{1}{2} \xrightarrow{\text{مقابل}} \frac{1}{2} \quad \sin \alpha = \frac{1}{2} \rightarrow \alpha = \frac{\pi}{6}$

ب) $\cos \frac{11\pi}{6} = \frac{\sqrt{3}}{2} \xrightarrow{\text{مقابل}} -\frac{\sqrt{3}}{2} \quad \sin \alpha = -\frac{\sqrt{3}}{2} \rightarrow \alpha = \frac{4\pi}{3}$