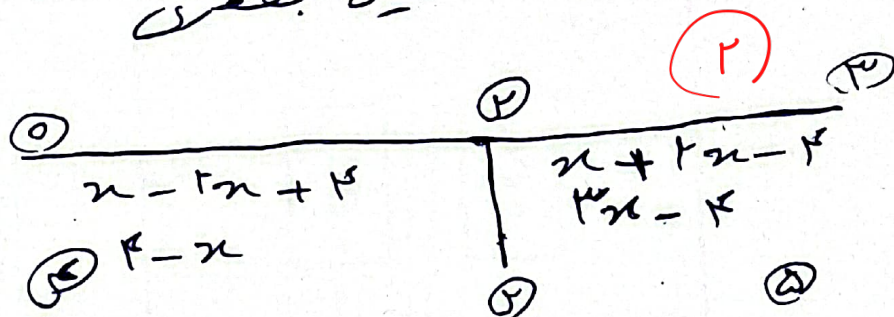


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نوع جعفر

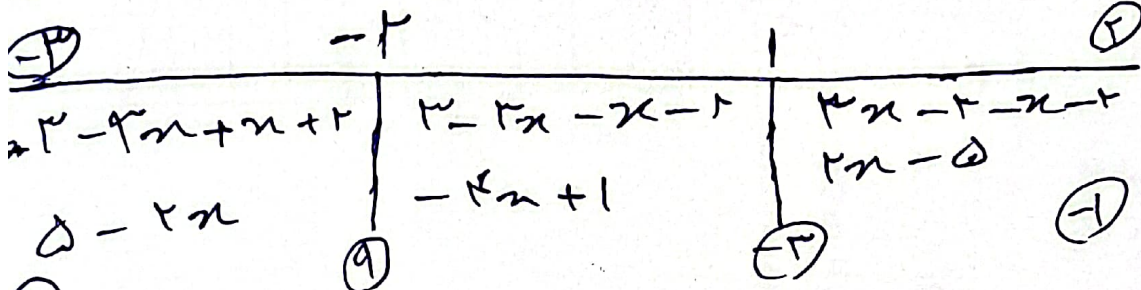
① $y = x + |2x - 4|$
 $R_y = [2, +\infty)$ ✓



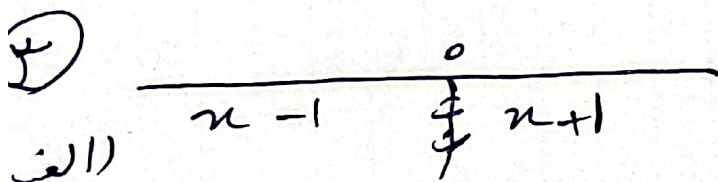
② $y = |x - 2| + |x - 1| - |x|$

$R_y = [-1, +\infty)$ ✓

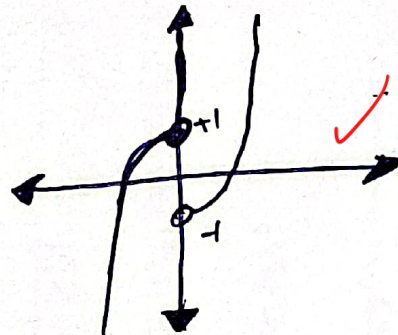
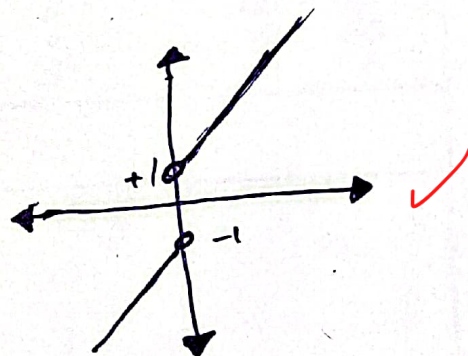
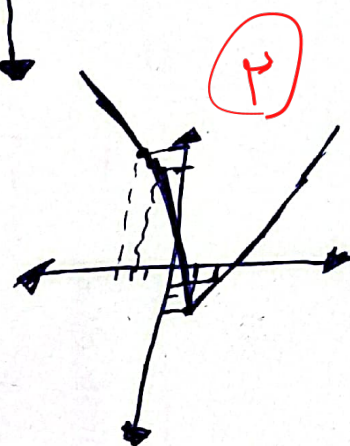
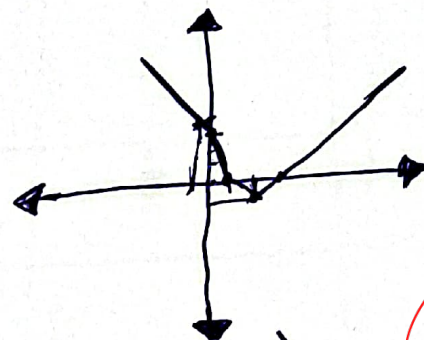
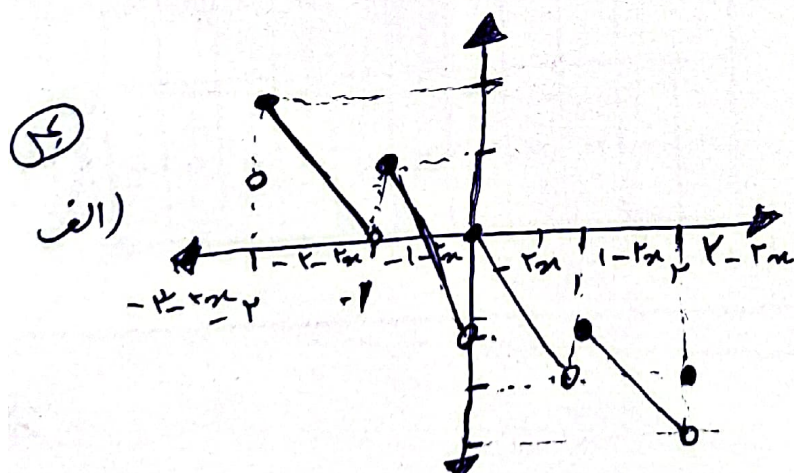
③ $|5x - 2| - |x + 2| = 4$



④ $x = -x$ ✓

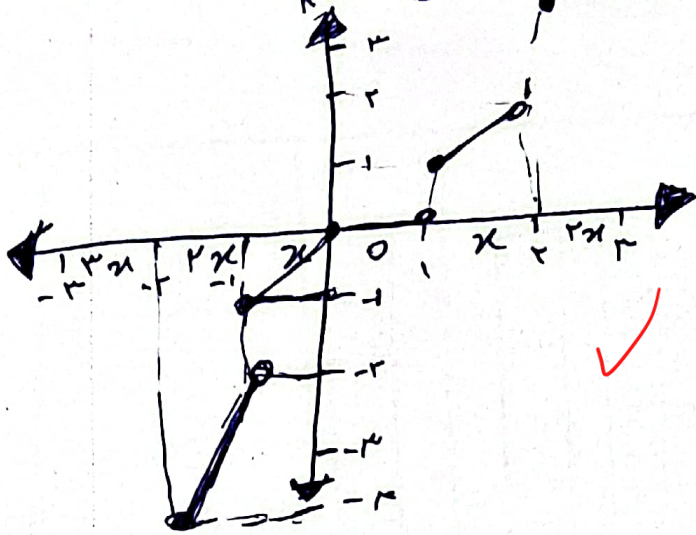


⑤ $-x^2 + 1$ and $x^2 = 1$



(2)

ج)



د)

الف) $x - [x] \Rightarrow R_y = [0, 1)$ ✓ ب) $x - [x] \Rightarrow R_y = [0, 1)$ ✓

2.) $\frac{x}{2} - [\frac{x}{2}] \Rightarrow R_y = [0, 1)$ ✓ 3.) $[x] - x \Rightarrow R_y = [-1, 0]$ ✓

هـ)

الف) $\sqrt{1+x} = \sqrt{1+x} \Rightarrow R_y = [-\sqrt{1+x}, \sqrt{1+x}]$ ✓

ب) $\sqrt{1+x} = 0 \Rightarrow R_y = [-0, 0]$ ✓

3.) $\sqrt{1+x} = \sqrt{1+x} \Rightarrow [-\sqrt{1+x}, \sqrt{1+x}]$ ✓

$R_y = \{-7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6, 7\}$ ✓

4.) $\sqrt{1+x} = \sqrt{1+x} \Rightarrow [-\sqrt{1+x}, \sqrt{1+x}]$ ✓

الف) $-x \rightarrow y \Rightarrow R_y = [0, 1]$ ✓ ب) $-x \rightarrow y \Rightarrow R_y = [0, 1]$ ✓

الف) $\sin^2 x + \cos^2 x + x \cos^2 x = 1$
 $1 + x \cos^2 x = y$

$0 \rightarrow 1$
 $1 \rightarrow x \Rightarrow R_y = [1, x]$ ✓
 $\frac{0}{y} = 0 \rightarrow 1$

ب) $\frac{\frac{y \cos x}{\sin x}}{\frac{1}{\sin x}} = y \cos x \sin x = \sin 2x \Rightarrow R_y = [-1, 1]$ ✓

② با افق $\{0, 1\}$

⑨ $R_Y = [2^{-3}, 1]$ ✓ ب $[\frac{1}{\lambda}, 1] \Rightarrow R_Y = \{0, 1\}$

⑩ $\frac{(n+4)(2n-1)}{n+4} \Rightarrow R_Y = \mathbb{R}$ (0, 1.5)

$D = \mathbb{R} - \{-4\}$ $f_{(-4)} = -9 \rightarrow R = \mathbb{R} - \{-9\}$

ب) $\frac{(n-1)(n^2+1+1)}{n-1} = (n^2+n+1) \Rightarrow R = \mathbb{R}$
 $\frac{-1}{2} \Rightarrow 0.5 - 0.5 + 1 = 1$

$D = \mathbb{R} - \{1\}$ طرح ۳ حذف
نسبت (سهم است) $\Rightarrow R_Y = [0, 1.5, +\infty)$ ✓

$f(1) = f_{(-1)} = 3$

* حتماً باید قبل از ساده کردن دامنه رو حساب کنی که بتونی فکادیری که به ازای آن ایداری نه
 تو دامنه نیست از بدو حذف کن!