

راندن و ضرب

مربی ریاضی

تلفن شماره ۱

الف)  $-2 \leq 3x - 2 \leq 2$

$\frac{2}{3} \leq x \leq \frac{4}{3}$

$P_f = [\frac{2}{3}, \frac{4}{3}]$

①

ب)  $-4 \leq 3x - 2 \leq -2$

$\frac{-2}{3} \leq x \leq 0$

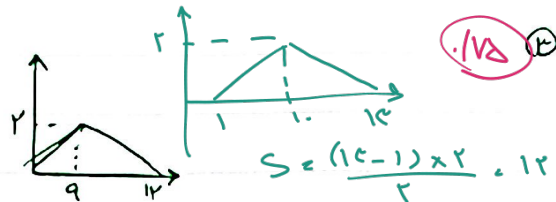
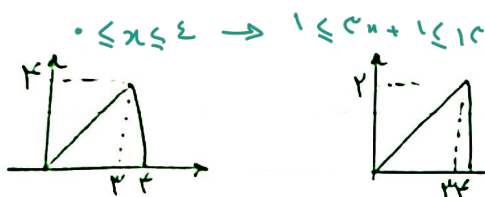
دقتی دانه  $f(x)$  را در حدی که  $x$  ها در این بازه هستند

$-2 \leq x \leq -2 \rightarrow -12 \leq 3x - 2 \leq -4 \rightarrow -14 \leq 3x - 2 \leq -8 \rightarrow [-14, -8]$

$f(x) = x + \sqrt{x-2} \rightarrow x + \sqrt{x-2} \rightarrow (\sqrt{x-2} + \frac{1}{\sqrt{x-2}})^2 +$

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$f(x) = x \rightarrow \text{انتقال} \rightarrow x-2 + \sqrt{x-2} \xrightarrow{y=x} x = 4-2 + \sqrt{4-2} \rightarrow \sqrt{2} \leq 2 \rightarrow x \leq 4$



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$A|_r$

$f(x) = y \rightarrow f(r) = -r$

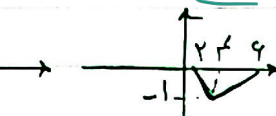
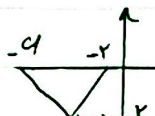
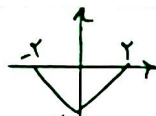
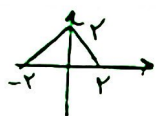
$f(\frac{x-a}{r}) = f(r)$

$\frac{x-a}{r} = r$

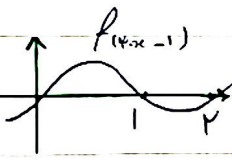
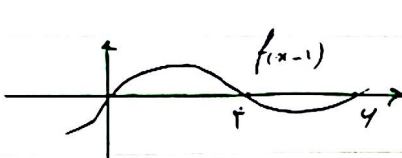
④ ۱

$\frac{y-a}{r} = -r \rightarrow y = a - r$

$y = a - r \rightarrow a - r = r(x-a) + a - r \rightarrow a - r = r(x-a) + a - r$



⑤ ۲



⑥ ۲

$(x+r)(f(x-1)) \geq 0$

$(x+r)(f(x-1)) \leq 0$

$f(x) = [-2, 0] \cup [1, 2]$

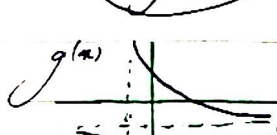
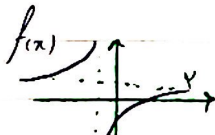
$g(x) = |2x + r - 2| - 2 \rightarrow g(0) = f(0) \rightarrow |2k - 2| = 4 \rightarrow 1 < k < 3$

$f(x) = |2x - r + k| + 1 - 2$

$g(x) = |2x - r + k| - 2$

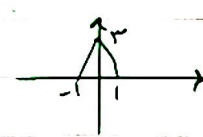
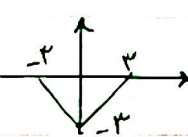
$f(x) = y \rightarrow |2x - r + k| + 1 - 2 = y$

$g(x) = |2x - r + k| - 2 = y \rightarrow |2x - r + k| = y + 2$



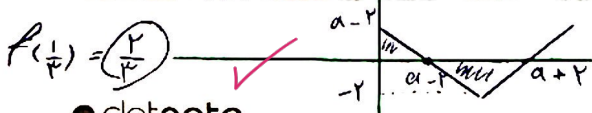
راه حل:  $\frac{2x-1}{x+1} = \frac{1-2x}{x+1} \rightarrow \frac{1-2x}{x+1} = \frac{3-2x}{x+1} \rightarrow 1-2x = 3-2x \rightarrow 1=3$

$(k-2) \leq x \leq (k-1) + 2 \rightarrow k-2 \leq x \leq k+1$



$\frac{1}{r} \times \frac{r}{r} = \frac{1}{r}$

⑦ ۲



$\frac{1}{r} \times \frac{r}{r} + \frac{(a-r)^2}{r} \rightarrow a=r$

⑧ ۲

● dotnote