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نام و نام خانوادگی کلاس پاسخنامه تشریحی تکلیف شماره ۸

$$R_{g \cup f} = \{(-1, 2), (0, 2), (1, 4)\}$$

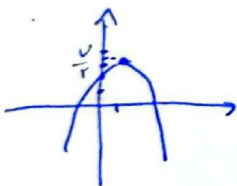
$$x+2 \leq 4 \parallel \checkmark$$

$$R_{g \cup f} = (-\infty, 4]$$

$$R_{f \cup g} = [0, +\infty) \quad R_{g \cup f} = (-\infty, 4] \cup [0, +\infty) \checkmark$$

$$y = -\frac{1}{r}x^2 + x + r$$

ext
max

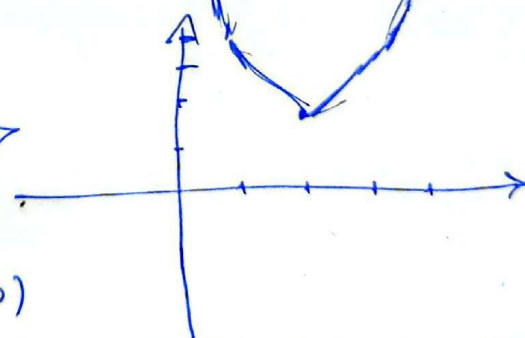


$$-\frac{x^2}{r} + x + r > \frac{r}{r} \rightarrow x^2 - rx - r < 0 \quad \begin{matrix} -1 & r \\ + & - & + \end{matrix}$$

$$\sqrt{r-(-1)} \quad \downarrow \quad \sqrt{x+1} \quad \boxed{r} \quad \checkmark \quad (a, b) \quad \downarrow \quad (-1, 2)$$

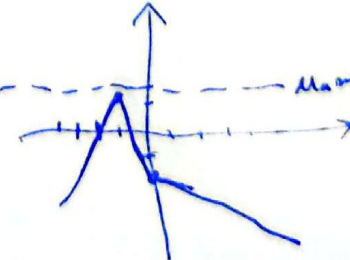
$$\begin{array}{c|c|c} -1 & 0 & r \\ \hline -x+1 & x-x & x-x \\ \hline x-1 & x-x & x-x \end{array} \Rightarrow$$

$$x-1+x+r-x \quad \checkmark \quad \boxed{\min_{R_{g \cup f}} y} \quad R_{f \cup g} = [r, +\infty)$$



$$\begin{array}{c|c|c} -1 & 0 & \\ \hline x+1 & 1-x-x & 1-x-x \end{array} \Rightarrow$$

$$R_{f \cup g}$$

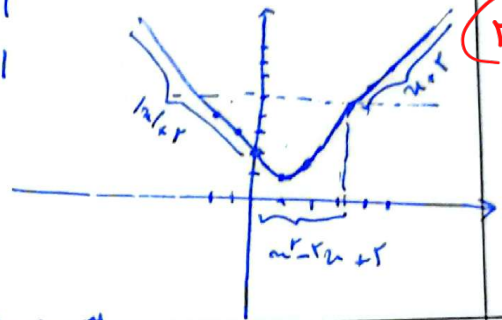


$$R_{f \cup g} = (-\infty, 1] \checkmark$$

— از این مقدار که u با عبارت صورت ساده شود

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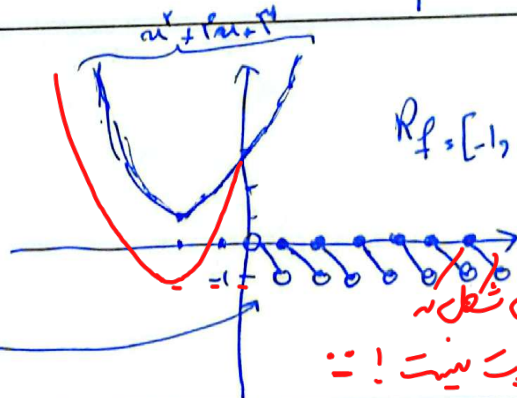
$$[0, \frac{1}{2}, 1] \rightarrow u = 2u + 1 \rightarrow \text{cut} \quad | \quad 1$$



$$R_f = [1, +\infty) \checkmark$$

(۲)

$$u^2 + 2u + 1 \rightarrow \text{cut} \quad \begin{matrix} -1 \\ -1 \end{matrix}$$



$$R_f = [-1, +\infty) \checkmark$$

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$$[2u] - 2u \rightarrow \text{نقطه‌ای با شیب مثبت}$$

از روی این شکل
۱- تو بوی نیست!

$$D_f \rightarrow 2u + 1 \rightarrow u = -\frac{1}{2} \quad D = [-\frac{1}{2}, +\infty) \rightarrow b = -\frac{1}{2} \checkmark$$

$$\xrightarrow{\text{فنی}} u = -\frac{1}{2} \rightarrow y = a + 1, 0 \rightarrow \sqrt{a+1} \checkmark \quad \boxed{ab = -4} \checkmark$$

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$$\sqrt{2+2\sqrt{1-u^2}} \quad D_f = (-1, 1) = D_g$$

$$y = \frac{f(u)}{2} - \frac{g(u)}{2} \xrightarrow{\text{این}} R = [0, \sqrt{2}] \checkmark$$

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