

نام و نام خانوادگی (نام و نام خانوادگی) پاسخنامه تشریحی تکلیف شماره ۲... کلاس... در تاریخ ۱۳۹۵/۰۵/۰۵
 ۱۹, ۲۵ حضا سبت کر بیژن!

$$f(u) = (u+1)^2 + (3u-1)^2 + nu^2 + h \cdot u + m \cdot n \rightarrow y = -31$$

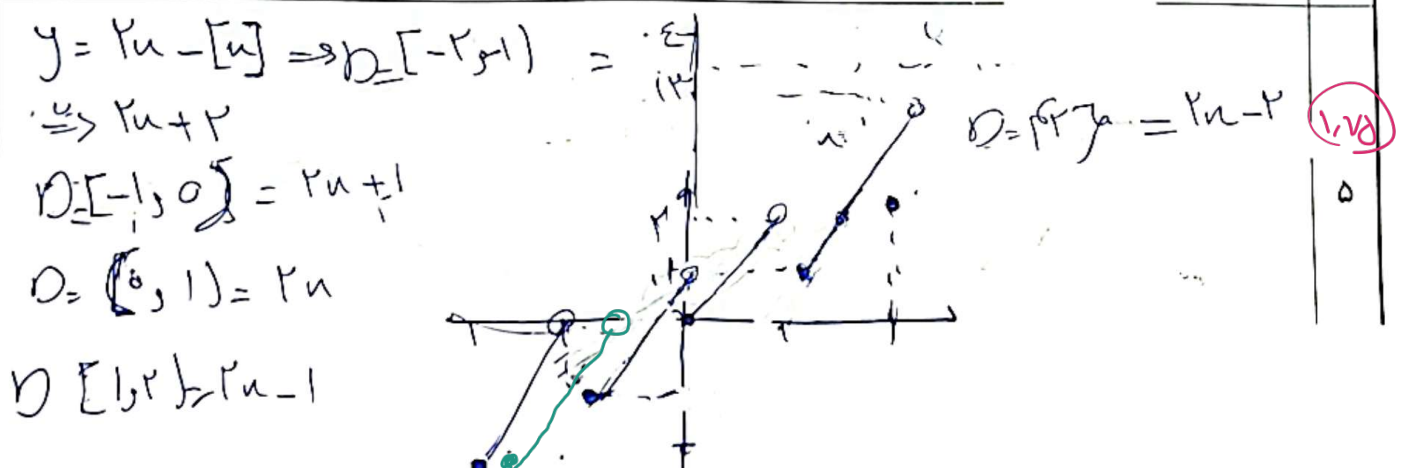
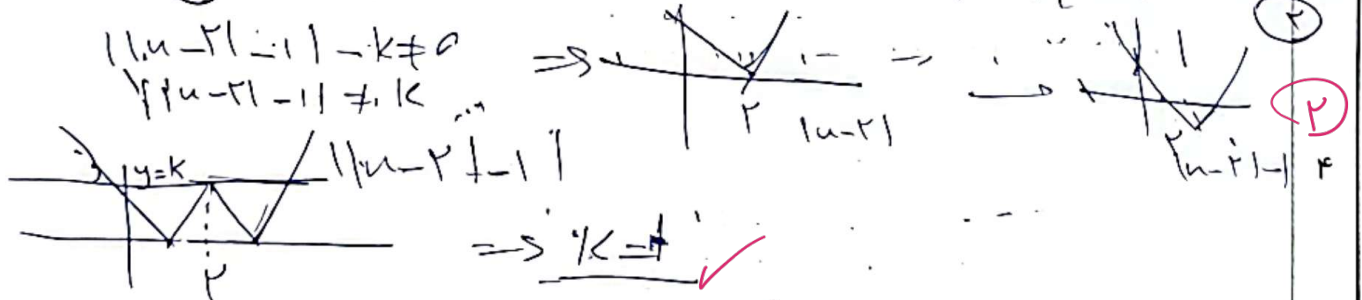
$$u^2 + 2u + 1 + 9u^2 - 6u + 1 \Rightarrow 10u^2 - 4u + 2 \Rightarrow m = -10, h = 2$$

$$g(u) = f\left(\frac{-10}{20}, \frac{2}{20}, \frac{-9}{20}\right) = f\left(-\frac{1}{2}, \frac{1}{10}, -\frac{9}{20}\right) = f\left(-\frac{1}{2}, \frac{1}{10}, -\frac{9}{20}\right) = -10 - 11 + 10 + 2 = -9$$

$$y = \sqrt{\frac{u-2}{u^2-4u-1}} \Rightarrow \sqrt{\frac{u-2}{(u^2-4u-1)(u^2+21)}} \Rightarrow \frac{-2}{-4} + \frac{2}{4} = 0$$

$$\frac{2u^2+1}{2-4u} = \frac{2-4u}{2-4u} \Rightarrow 2-4u \neq 0 \Rightarrow 2 \neq 4u \Rightarrow u \neq \frac{1}{2}$$

$$f(u) = \sqrt{u(u^2-1)} \Rightarrow u(u^2-1) \geq 0 \Rightarrow u(u-1)(u+1) \geq 0 \Rightarrow u \in [-1, 0] \cup [1, \infty)$$



$$f(u) = \frac{u^2 - 5u + 3}{u+2} + b \Rightarrow \frac{(u-3)(u-1)}{u+2} + b$$

$\Rightarrow \text{دو} \Rightarrow a = -1 \quad \text{و} \quad a = -3 \Rightarrow \text{اگر } a = -3 \Rightarrow u - 1 + b = u \Rightarrow b = 1$
 اگر $a = -1 \Rightarrow u - 3 + b = u \Rightarrow b = 3 \Rightarrow a - b = -4$

$f(u) = \frac{u^2(u+2) - 1(u+2)}{(u^2-1)} \Rightarrow \frac{u^3 + 2u^2 - u - 2}{(u^2-1)}$
 $\frac{1}{2} + a = \frac{1}{2} \Rightarrow a = \frac{1}{2}$
 $a - 3b = 1$
 $a + b = 3$
 $-4b = -2 \Rightarrow b = \frac{1}{2} \Rightarrow a = \frac{3}{2}$
 $a - 3b = 1$

از آنجا که $f(u) = \sqrt{u-3a} + k - 1$ و $g(u) = \sqrt{b-5u} + 2k$
 $f(1) = g(1) \Rightarrow \sqrt{1-3a} + k - 1 = \sqrt{b-5} + 2k$
 $\sqrt{1-3a} = \sqrt{b-5} + k$
 $1-3a = b-5 + k^2$
 $3a = b - k^2 - 4$
 $3a - b - k^2 = -4$
 $3a - \frac{b}{2} - k^2 = -4$
 $3a - \frac{b}{2} - k^2 = -4$

$f(u) = \sqrt{m-u} + n$
 $g(u) = \sqrt{2u+2}$
 $m - u \leq 0 \Rightarrow m = 0$
 $2u+2 \geq 0 \Rightarrow u \geq -1$
 $\sqrt{m-u} + n = 2\sqrt{2}$
 $n = 1\sqrt{2}$
 $m+n = 1\sqrt{2}$

