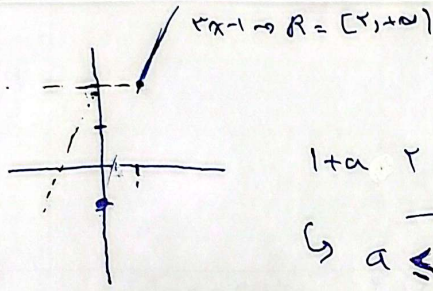


نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۵۱ کلاس: دبیر: A.....

الف) $h^2 - h = 2 \rightarrow (h+1)/(h-2) < \frac{-1}{+2} \rightarrow (-1, 5) \cup (-2, 1) \times$ مربع
 $n=2, m=3 \rightarrow \{(2, 5) (3, 2) (2, 3) (m, 2) (-1, 2) (n, 2) (-1, 4) (n, 4)\}$

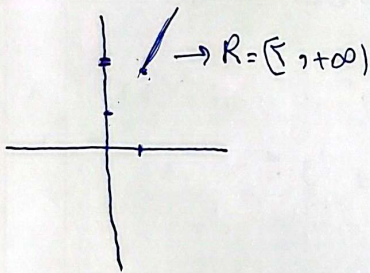
ب) $m=2 \Rightarrow \{(-1, 1) (1, 2) (2, 2) (a, 1) (a, 2, n) (2, 3)\} \Rightarrow a=-1 \rightarrow$
 $\hookrightarrow a=-1$

$\{(-1, 1) (1, 2) (2, 3) (1, n) (2, 3)\} \rightarrow n=2$



بنای برد مستقیم داشته باشند.

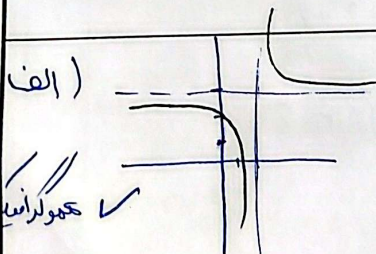
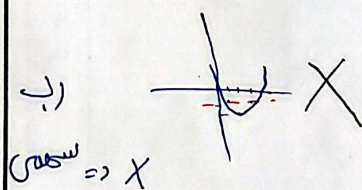
ب) $x+a$ به ازای x برابر است با $(-5, 1+a)$
 $(-\infty, 2]^2$



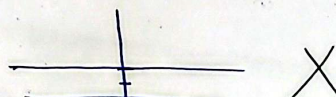
ب) $x+a-1$ به ازای x برابر $(-\infty, a-1]$

$a-1 \leq 2 \quad a < 1$

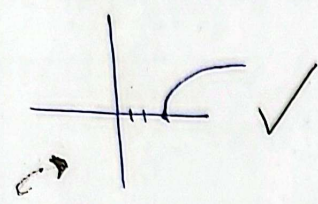
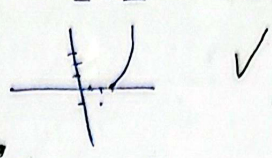
الف) $x = y^3 + 2 \rightarrow y^3 = x - 2 \rightarrow y = \sqrt[3]{x-2}$



ب) $\frac{2(2+x)}{x+2} \rightarrow y=2$



$x = \frac{3y+1}{y-2} \rightarrow xy - 3y = 2x+1 \Rightarrow y(x-3) = 2x+1 \rightarrow y = \frac{2x+1}{x-3}$

الف)  $x = \sqrt{y-3} \rightarrow x^2 = y-3 \rightarrow y = x^2+3$	ب)  $y = x^2 - 2x + 3 + 1$ $y = x^2 - 2x + 4 \rightarrow y = (x-1)^2 + 3$ $\rightarrow x-1 = \pm \sqrt{y-3} \rightarrow x = 1 \pm \sqrt{y-3}$
$y = x + \sqrt{x} \rightarrow x = y + \sqrt{y} \rightarrow x^2 = y^2 + y + 4y\sqrt{y}$	۶
$\frac{x_1}{\sqrt{x_1^2-2}} = \frac{x_2}{\sqrt{x_2^2-2}} \rightarrow \frac{x_1^2}{x_1^2-2} = \frac{x_2^2}{x_2^2-2} \Rightarrow x_1^2 x_2^2 - 2x_1^2 = x_1^2 x_2^2 - 2x_2^2$ $\Rightarrow x_1^2 = x_2^2 \Rightarrow x_1 = \pm x_2$  $x_1 = x_2$ $f^{-1} \rightarrow x = \frac{y}{\sqrt{y^2-2}} \Rightarrow x^2 = \frac{y^2}{y^2-2} \Rightarrow y^2 x^2 - 2x^2 = y^2 \Rightarrow y^2 x^2 - y^2 = 2x^2$ $y^2 (x^2 - 1) = 2x^2 \Rightarrow y^2 = \frac{2x^2}{x^2-1} \rightarrow y = \pm \sqrt{\frac{2x^2}{x^2-1}} \rightarrow y = \pm \frac{\sqrt{2}x}{\sqrt{x^2-1}}$	۷
$y + y x = x \Rightarrow y = \frac{x-y x }{x(1-y)} \rightarrow x = \frac{y}{1-y} \rightarrow y = \frac{x}{1-x} \Rightarrow f(x)$ $\sqrt{x} = y+1 \rightarrow x = (y+1)^2 \rightarrow y = (x+1)^2 \Rightarrow g^{-1}(x)$ $-\frac{5}{6} \times \frac{10}{11} = -\frac{5}{11} = f(-\frac{5}{6})$ $g^{-1}(-\frac{5}{6}) = (-\frac{5}{6} + 1)^2 \rightarrow \frac{1}{6}$	۸
$y = \sqrt{x-1} = f(x) \rightarrow y^2 = x-1 \rightarrow x = y^2+1 \rightarrow f(x) = x+1$ $g(x) = x^2+1 + \sqrt{x^2+1} \rightarrow g(2) = 10\sqrt{2} + \sqrt{10\sqrt{2}} \rightarrow g^{-1}(12) \rightarrow$	۹