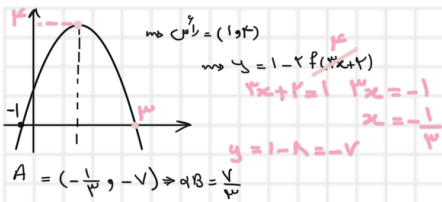
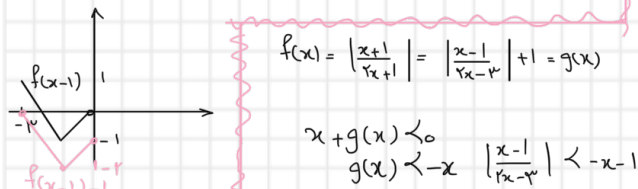
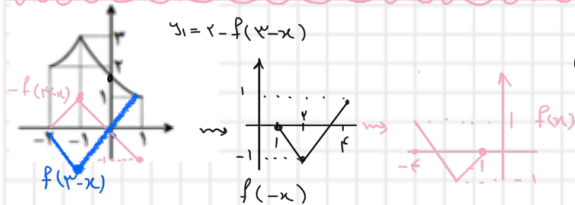
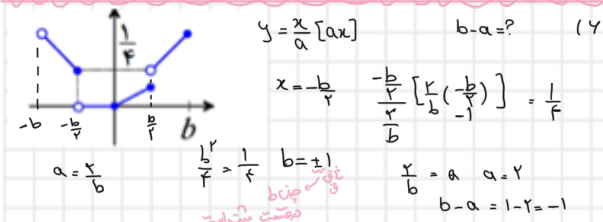


Note:

حوری حقیقی



$y = f(x-1) + g(x+1)$ $Dg = [-1, b]$, $Df = (a, 7]$
 $(a+1, \infty) \cap [-1, b-1] = (-2, \infty)$
 $a+1 = -2 \Rightarrow a = -3$
 $b-1 = \infty \Rightarrow b = 1$
 $a-b = -3-1 = -4$



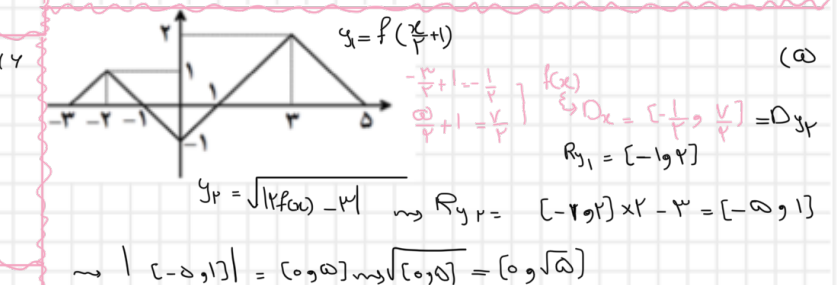
$d(2) =$

$g(x) = \sqrt{2 \ln f(x) - f(x)} = f(x)(2 \ln - f(x)) > 0$
 $0 < x < 2$

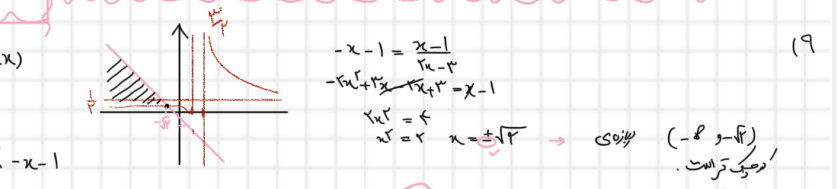
$Dg = [0, 2] \Rightarrow 0, 1, 2$

$y = -\frac{1}{x}(x-4)^2 + 3 \Rightarrow (x-4)^2 = 9$
 $x-4 = 3 \Rightarrow x = 7$
 $x-4 = -3 \Rightarrow x = 1$

$3 - \sqrt{2(x+1)} \rightarrow -3 + \sqrt{2(x+1)} + \infty = \frac{4}{x}$
 $\sqrt{2(x+1)} = \frac{4}{x} - \frac{3}{x} = \frac{1}{x}$
 $2(x+1) = \frac{1}{x^2}$
 $2x^3 + 2x^2 = 1$
 $2x^3 + 2x^2 - 1 = 0$
 $x = \frac{1}{2}$



$-\log_r(x+1) + 3 = g(x)$
 $g(-1) = -\log_r(0) + 3 = -1$
 $g(-4) = -\log_r(3) + 3 = -3$
 $g(-1) + g(-4) = -4$



(10)