

نام و نام خانوادگی: ... پسر ... (مرد) ... پاسخنمه تشریحی تکلیف شماره ۱... کلاس دوازدهم ...

$f(x) = x - 2 + \sqrt{x - 4}$ منتظم نقطه اول $x - 2 + \sqrt{x - 4} = x$
با هم مساوی می‌کنیم
 $\Rightarrow \sqrt{x - 4} = 2 \Rightarrow x - 4 = 4 \Rightarrow x = 8, y = 1$

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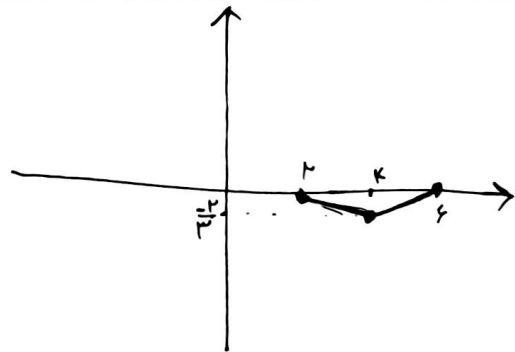
$A_g = \frac{1}{p} \times k \times k = 1$ و $A_g = 2 \times \frac{1}{3} \times A_f$
 $\Rightarrow 1 = \frac{2A_f}{3} \Rightarrow A_f = 1 \times \frac{3}{2} = 1.5$

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$\frac{x - a}{2} = 2 \Rightarrow x = a + 4$
 $y = a + 4(-3) = a - 12$
 $\rightarrow y = 2x - 1 \rightarrow a - 12 = 2(a + 4) - 1 \Rightarrow a = -12$

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$(0, 0), (2, 2), (4, 0)$
 $\rightarrow (-2, 0), (0, -2), (2, 0)$
 $y = \frac{1}{2} f(x)$
 $(4, 0), (2, -\frac{1}{2}), (0, 0)$



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$\rightarrow -1, 2, 5 \Rightarrow 3x - 1 = -1, 2, 5 \Rightarrow x = 0, 1, 2$
 $\Rightarrow D_g = [-2, 0] \cup [1, 2]$

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$f(g(x)) \rightarrow x=2 \Rightarrow f(3) = 4$ ① $x=3 \Rightarrow f(4) = 5$ ②, $x=5 \Rightarrow$ غرق ①, ② $\Rightarrow f \circ g = \{(2, 4), (3, 5)\}$	٤
$g \circ f \rightarrow f(2) = 5 \Rightarrow g(5) = 4, f(3) = 1 \Rightarrow g(1) = 2$ $f \circ g \rightarrow g(1) = 2 \Rightarrow f(2) = 5, g(5) = 4 \Rightarrow f(4) = 5$ $g(2) = 3 \Rightarrow f(3) = 1$ عند $x=2$ نقاب $\Rightarrow (g \circ f)(2) - (f \circ g)(2) = 4 - 1 = 3$ $\{(2, 3)\}$	٧
$\rightarrow -\sin^2 x \leq 0 \Rightarrow f(-\sin^2 x) = 1 - \sin^2 x = \cos^2 x$ $\cos^2 x \geq 0 \Rightarrow f(\cos^2 x) = 1 - \cos^2 x = \sin^2 x$ $f \circ f(-\sin^2 x) = \sin^2 x$	٨
$x=2 \Rightarrow 2f(2) = 1 \Rightarrow f(2) = \frac{1}{2} \Rightarrow f(x) = \frac{1}{2}x - 2$ $f \circ f(0) \Rightarrow x=0 \Rightarrow f(0) = -2$ $\Rightarrow f(-2) \Rightarrow \frac{1}{2}(-2) - 2 = -1$ $\Rightarrow f \circ f(0) = -1$	٩
$f \circ g \rightarrow 2(x^2 - 3x + 1) - 5 = 2x^2 - 4x + 1$ $g \circ f \rightarrow (2x - 5)^2 - 3(2x - 5) + 1 = 4x^2 - 4x + 4$ $2x^2 - 4x + 1 = 4x^2 - 4x + 4 \Rightarrow 2x^2 - 2x + 3 = 0$ $x_1^2 + x_2^2 = 5 - 2P \Rightarrow 10 - 2\left(\frac{3}{2}\right) = 10 - 3 = 7$	١٠