

نام و نام خانوادگی:
پاسخنامه تشریحی تکلیف شماره ۲۲... کلاس:
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$$\beta^2 - 5\beta + 2 = 0 \Rightarrow \beta^2 = 5\beta - 2 \quad \beta^3 = \beta \times \beta^2 = \beta(5\beta - 2) = 5\beta^2 - 2\beta \Rightarrow 5(5\beta - 2) - 2\beta \Rightarrow \beta^3 = 23\beta - 10 \quad \# \quad (2)$$

$$\beta^5 = \beta^2 \times \beta^3 \Rightarrow \beta^5 = (5\beta - 2)(23\beta - 10) = 115\beta^2 - 94\beta + 20 \Rightarrow \beta^5 = 679\beta - 190$$

$$\alpha + \beta = -\frac{b}{a} \Rightarrow \alpha + \beta = 5 \Rightarrow \alpha = 5 - \beta$$

$$\frac{4\alpha + \beta^5}{5\beta^2} \xrightarrow{5, 0, \star} \frac{20 - 4\beta + 679\beta - 190}{25\beta - 10} = \frac{675\beta - 170}{25\beta - 10} = \frac{90(5\beta - 2)}{5(5\beta - 2)} = 18 \quad \checkmark$$

$$y = au^2 + bu + c \quad (-1.5, -4), (2, -6) \quad \text{نقطه ها}$$

$$\begin{aligned} -6 &= 9a + 2b + c \\ -4 &= 4a - 1.5b + c \end{aligned}$$

$$\Rightarrow 9a + 2b + c = 4a - 1.5b + c \Rightarrow -4.5a = -3.5b \Rightarrow b = -1.5a$$

$$\text{مجموع ضرایب این تابع} = f = -\frac{b}{a} = \frac{1.5a}{a} = 1.5 \quad \checkmark$$

$$\text{اقتلاص} = \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{4k^2 - 20}}{1} = 2\sqrt{k^2 - 5} = \frac{4}{3}k$$

$$\Rightarrow 4k^2 - 20 = \frac{16}{9}k^2 \Rightarrow k^2 - 5 = \frac{4}{9}k^2 \Rightarrow 9k^2 - 45 = 4k^2 \Rightarrow 5k^2 = 45 \Rightarrow k^2 = 9$$

$$\text{نقطه سوال} : \left[\frac{k^2}{2} \right] \xrightarrow{k^2=9} \left[\frac{k^2}{2} \right] = \left[\frac{9}{2} \right] = 4 \quad \checkmark$$

$$\text{میانگین} = \text{Mean} = \frac{3 + (-5)}{2} = -1 \Rightarrow \frac{\alpha + \beta}{2} = -1 \Rightarrow \alpha + \beta = -2$$

$$\alpha^2 + \beta^2 = (\alpha + \beta)^2 - 2\alpha\beta \Rightarrow 5 = 4 - 2\alpha\beta \Rightarrow \alpha\beta = -\frac{1}{2}$$

$$y = (k - u)(\alpha - \beta) \xrightarrow{1 = \text{نقطه}} u = \frac{\alpha + \beta}{2} = -1 = (-k - 1)(\alpha - \beta)$$

$$\Rightarrow k = -\frac{2}{3} \quad k \times \beta = \left(-\frac{2}{3}\right)\left(-\frac{1}{2}\right) = \frac{1}{3} \quad \checkmark$$

$$-(u^2 - 5u - m) = 0 \Rightarrow u = \frac{5 \pm \sqrt{25 + 4m}}{2} \quad u < \frac{9}{2} \Rightarrow 5 \pm \sqrt{25 + 4m} < 9$$

$$\Rightarrow \sqrt{25 + 4m} < 4 \Rightarrow 25 + 4m < 16 \Rightarrow m < -2.25$$

$$\text{فرکانس مثبت} = \text{دایره درخشان} \Rightarrow \Delta > 0 \Rightarrow 25 + 4m > 0 \Rightarrow m > -6.25$$

$$\Rightarrow m = -4.5 - 5.5 - 6.5 - 3 = -20 \quad \checkmark$$

صورت سوار چون نقطه مشترک پس min داراست	$y_{cut} = \frac{-\Delta}{f_a} = \frac{-(144 - 4(5m-1)(m))}{f_m} = 2$ $\Rightarrow \frac{20m^2 - f_m - 144}{f_m} = 2 \Rightarrow 20m^2 - f_m - 144 = 2f_m$ $y = m^2 - 12m + 4m - 1 \xrightarrow{m=2} y = 3m^2 - 12m + 14 \Rightarrow \text{نقطه مشترک} = y_{cut}$ $= \frac{12}{4} = 3 \checkmark$ چون $m=0$ و $m=5$ min داراست پس m میانه می باشد	(2) 6
	فرض می کنیم $\alpha\beta = \frac{c}{a} \Rightarrow \alpha\beta = 2a-1$, $\alpha+\beta = \frac{-b}{a} \Rightarrow \alpha+\beta = -2(a+1)$, $\alpha\beta = a^2$ $\Rightarrow a^2 = 2a-1 \Rightarrow a^2-2a+1=0 \Rightarrow a=1 \checkmark$	(2) 7
$x=t \Rightarrow t^2 - vt - a = 0 \Rightarrow p = \frac{c}{a} = \frac{-d}{1} = -d$ $t = \frac{v \pm \sqrt{49}}{2} \Rightarrow x^2 = \frac{v \pm \sqrt{49}}{2}$	$\Rightarrow x = \frac{v \pm \sqrt{49}}{2}$ $\Rightarrow x = \frac{v + \sqrt{49}}{2}$, $\frac{v - \sqrt{49}}{2}$ $\Rightarrow x = \frac{v + \sqrt{49}}{2}$, $\frac{v - \sqrt{49}}{2}$, $\frac{v + \sqrt{49}}{2}$, $\frac{v - \sqrt{49}}{2}$ $2p^2 - 3sp + 2s \xrightarrow{s=0, p=-d} 2d^2 - 0 + 0 = 2d^2$	(15) 8
$y = -x^2 - 1$, $y = kx^2 - 4k - 4$ $y_A = \frac{-\Delta}{f_a} \Rightarrow \frac{-(14 - 4(-4k))}{4k} = \frac{-4 - 4k}{k}$	$x_L = \frac{-b}{2a} \Rightarrow x_L = \frac{2}{1k}$ $-f_{x_A} - f = 1k x_A^2 - 4k - 4$ $\Rightarrow \frac{1}{k} - f = \frac{f}{k} - \frac{1}{k} - 4$ $\Rightarrow -1 - fk = \frac{f-1-4k}{-f} \Rightarrow k=2$ $\Rightarrow \frac{-4-12}{2} = -8 \checkmark$	(2) 9
$-m - n = -m^2 + m + 1$ $\Rightarrow m^2 - m - 1 - m - 1 = 0 \Rightarrow m^2 - 2m - 2 = 0$ $\Rightarrow \Delta > 0 \Rightarrow m^2 + 2m + 1 - f(m(-m-1)) > 0 \Rightarrow m^2 + 2m + 1 + f_m^2 + f_m > 0$ $\Rightarrow 5m^2 + 4m + 1 > 0 \Rightarrow m < -\frac{1}{5} \text{ or } m > -1$	* برای اینکه دو تابع فقط برخوردی نداشته باشند باید معادله تلافی آنها فاقد ریشه باشد: $\frac{m^2}{a} - \frac{(m+1)m}{b} - \frac{m-1}{c} = 0$ $-1 < m < -\frac{1}{5} \checkmark$ خروج عدد صحیح ندارد.	(2) 10