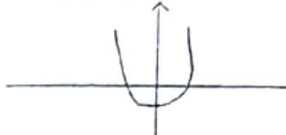
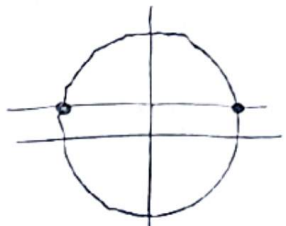
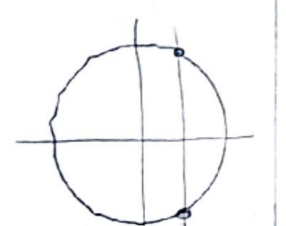
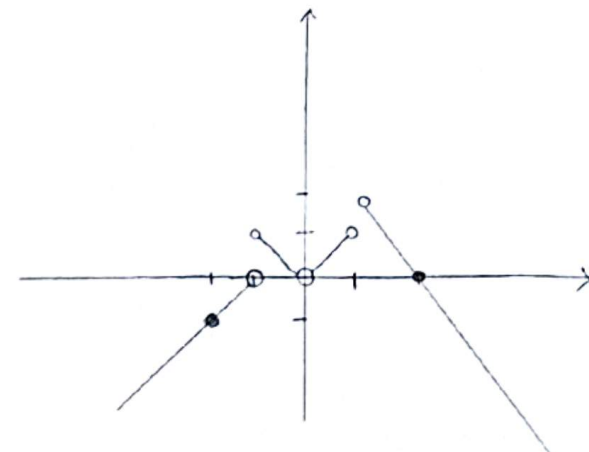
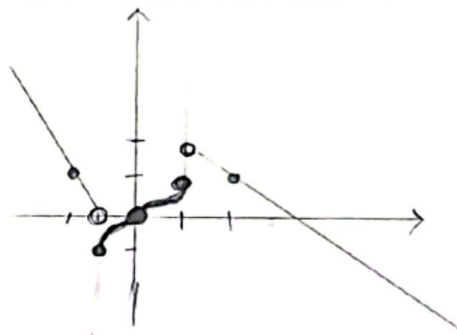


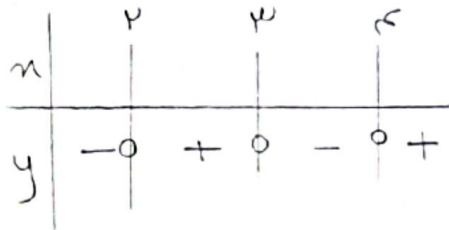
نام، نام خانوادگی: عارفه حمدانی - پاسنامه تشریحی تکلیف شماره: ۲ - کلاس: B - دفتر: B

الف) $y''' = 2x^2 - 1$ $\begin{cases} y_1''' = 2x_1^2 - 1 \\ y_2''' = 2x_2^2 - 1 \end{cases} \xrightarrow{x_1=x_2} 2x_1^2 - 1 = 2x_2^2 - 1$ $y_1''' = y_2''' \rightarrow y_1 = y_2 \text{ تابع است.}$	ب) $y''' + y = 2x^2 - 1$ تابع است. $\begin{cases} y_1''' + y_1 = 2x_1^2 - 1 \\ y_2''' + y_2 = 2x_2^2 - 1 \end{cases} \xrightarrow{x_1=x_2} 2x_1^2 - 1 = 2x_2^2 - 1$ $y_1''' + y_1 - y_2''' - y_2 = 0$ $(y_1 - y_2)(y_1'' - y_1 y_2 + y_2'') + (y_1 - y_2) = 0$ $(y_1 - y_2)(y_1'' - y_1 y_2 + y_2'' + 1) = 0 \Rightarrow y_1 = y_2$		
الف) $y = x^2 - 1$ تابع است. 	ب) $y + xy = x^2 + 1 \xrightarrow{x=0} y + 0 = 1$ $y = 1 \rightarrow y = \pm 1$ تابع نیست.	۲	
ج) $y''' + x''' = 2x - 1$ $\begin{cases} y_1''' + x_1''' = 2x_1 - 1 \\ y_2''' + x_2''' = 2x_2 - 1 \end{cases} \xrightarrow{x_1=x_2} y_1''' + x_1''' = y_2''' + x_2'''$ $y_1''' = y_2''' \Rightarrow y_1 = y_2$ تابع است.	ب) $\sqrt[3]{y} + \sqrt[3]{x} = 2 \xrightarrow{x_1=x_2} \sqrt[3]{y_1} + \sqrt[3]{x_1} = \sqrt[3]{y_2} + \sqrt[3]{x_2}$ $y_1 = y_2$ تابع است.	۳	
الف) $\tan \frac{\pi}{3} = \frac{\sin \frac{\pi}{3}}{\cos \frac{\pi}{3}} = \frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \sqrt{3}$	ب) $\cot \frac{\sqrt{3}\pi}{9} = \frac{\cos \frac{\sqrt{3}\pi}{9}}{\sin \frac{\sqrt{3}\pi}{9}} = \frac{-\frac{1}{2}}{-\frac{\sqrt{3}}{2}} = \frac{1}{\sqrt{3}}$	۳	
ج) $\tan 330^\circ = \frac{\sin 330^\circ}{\cos 330^\circ} = \frac{-\frac{\sqrt{3}}{2}}{\frac{1}{2}} = -\sqrt{3}$	ب) $\cot 180^\circ = \frac{\cos 180^\circ}{\sin 180^\circ} = \frac{-1}{0}$ تعریف نشده	۳	
الف) $\sin \alpha = \frac{1}{2}$ $\frac{\pi}{6}, \frac{5\pi}{6}$ 	ب) $\cos \alpha = \frac{\sqrt{2}}{2}$ $\frac{\pi}{4}, \frac{7\pi}{4}$ 	۴	
			۵

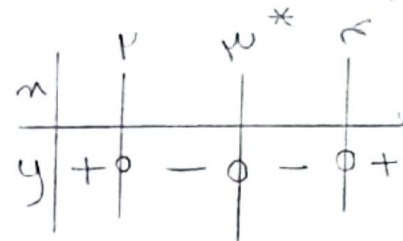


9

الف) $y = (x-2)(x-3)(x-4)$

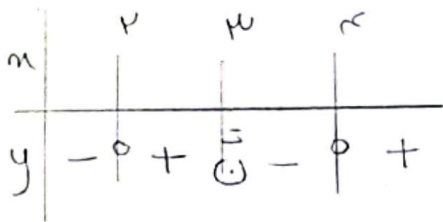


ب) $y = (x-2)(x-3)^2(x-4)$

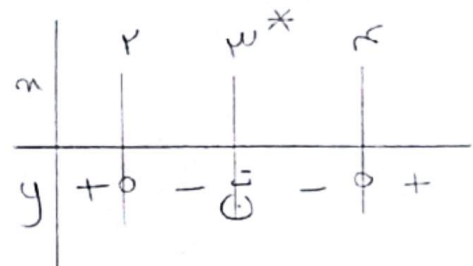


✓

الف) $y = \frac{(x-2)(x-4)}{x-3}$ $x-3 \neq 0$ $x \neq 3$

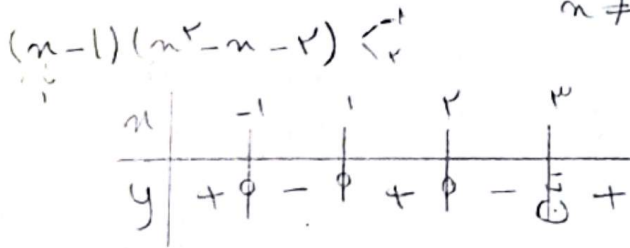


ب) $y = \frac{(x-2)(x-4)}{(x-3)^2}$

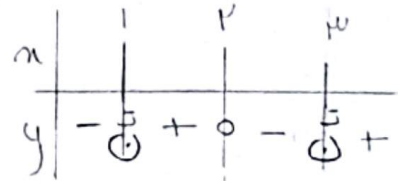


Λ

الف) $y = \frac{x^2 - 3x + 2}{x-3}$ $x-3 \neq 0$ $x \neq 3$

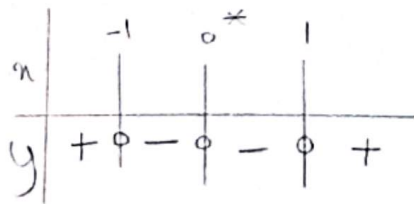


ب) $y = \frac{x^2 - 3x + 2}{x^2 - 4x + 3}$ $\frac{(x-1)(x-2)}{(x-1)(x-3)}$

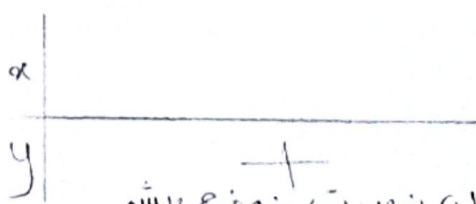


9

الف) $y = \frac{x^2 - x + 2}{x^2 + x + 2}$ $\Delta < 0$ $\Delta < 0$



ب) $y = \frac{x^2 + 3x + 2}{x^2 + 2x + 1}$ $\Delta < 0$ $\Delta < 0$



10

چون که صورت و مخرج همیشه
ندارد تغییر علامت هم جا موافق است.