نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ۳۰۲۷ کلاس .....

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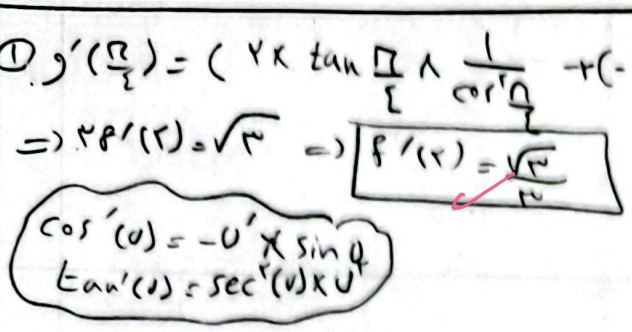

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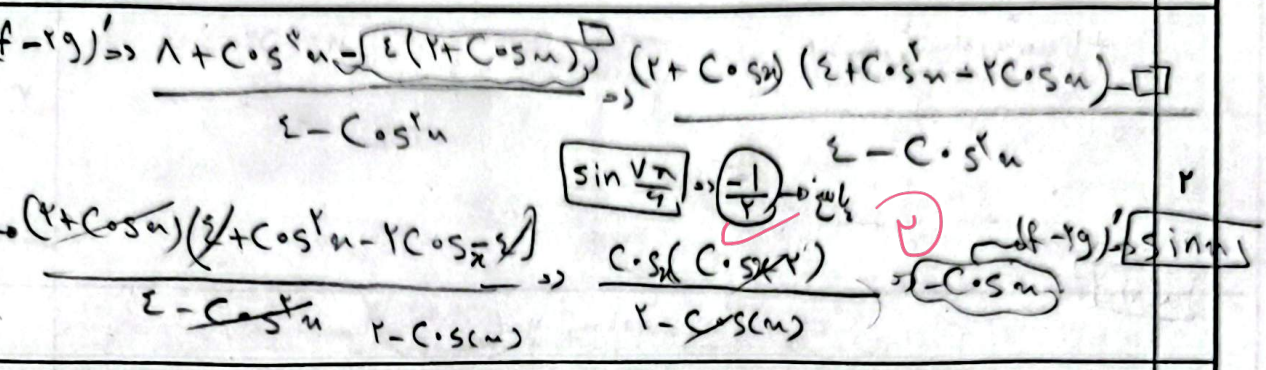

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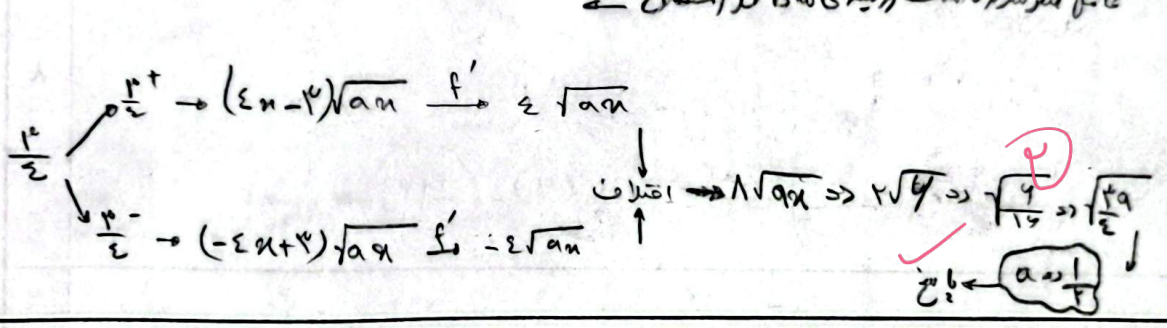

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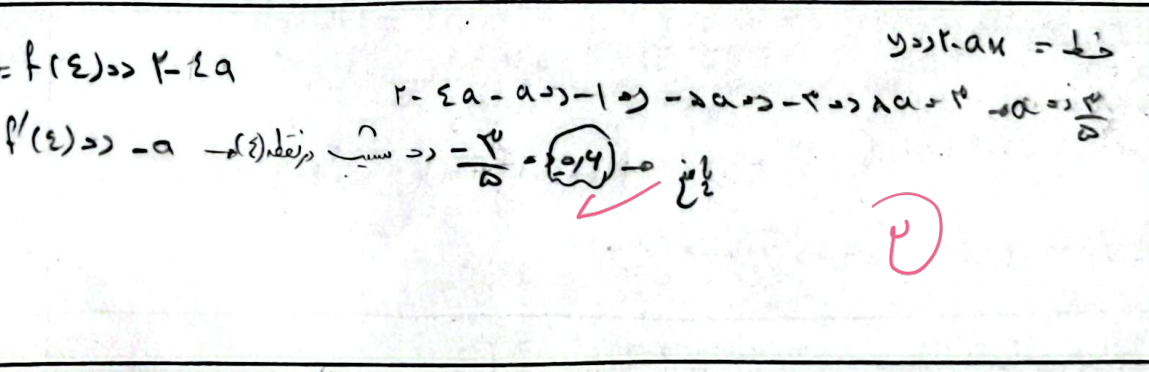

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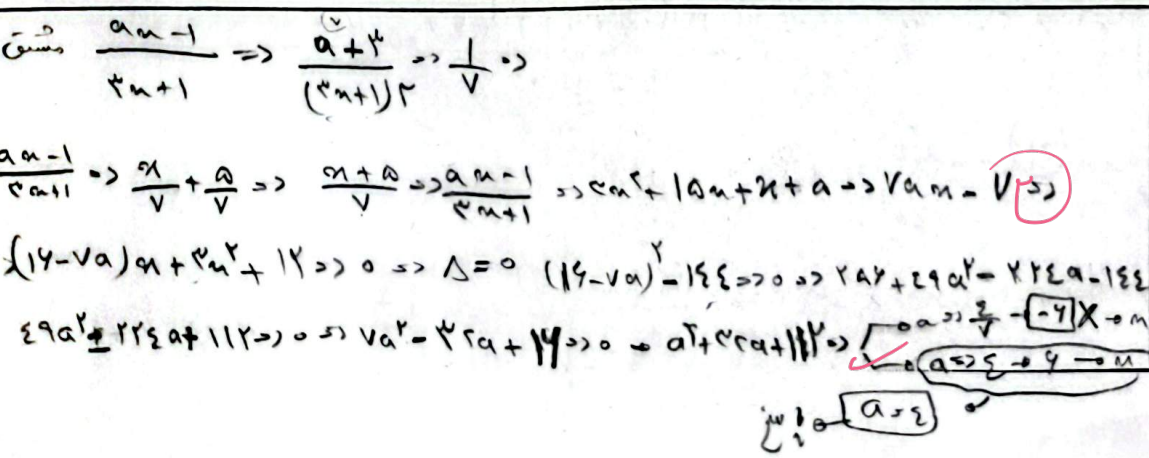

$3x^2+ax=0 \xrightarrow{x=4} 12a+a=0 \Rightarrow a=-12$ $8-12-b=0 \Rightarrow$ چون روی نمودار است $b=-14$ $-a+b=-14+12 \Rightarrow -4$ → پاسخ ۲	۶
$\lim_{x\to0} \frac{\sin^n(x^2)\times 2x\sin^{n-1}(x^2)\times\cos x^2}{(2\sin^2\frac{x}{2})^m}$ هم‌ارزی $\lim_{x\to0}\frac{(x^2)^n\times n\times(x^2)^{n-1}\times 2x}{(2(\frac{x}{2})^2)^m} = \frac{(x)^{2n+2n-2+1}\times 2n}{(x)^{2m}\times\frac{1}{2}}$ $= \frac{2nx^{4n-1}}{\frac{1}{2^m}\times x^{2m}} = 2^{m+1}\times n\times x^{4n-2m-1}$ → $4n-2m-1=0 \to n=\frac{2m+1}{4}$ $2^{m+1}\times\frac{2m+1}{4}=32\sqrt{2} \to m=\frac{7}{2},\ n=2 \to 2m+n=9$ ۵	۷
$\sqrt{y}x-x=\sqrt{y}+1 \Rightarrow \sqrt{y}(x-1)=x+1 \Rightarrow y=\left(\frac{x+1}{x-1}\right)^2$ — ضابطه وارون f $f'(x) - f^{-1'}(x)$ $f^{-1'}(x) \Rightarrow 2\left(\frac{-1-1}{(x-1)^2}\right)\left(\frac{x+1}{x-1}\right) \xrightarrow{x=2} -4\times(3) \Rightarrow -12$ → گزینه ۲ ۲	۸
$\frac{f(0)-f(1)}{1} \Rightarrow -11 \Rightarrow 8a-7 \Rightarrow -11 \Rightarrow a = -\frac{1}{2}$ $f(x) \Rightarrow (x^2+1)^3(-\frac{x}{2}+1) \to f'(x) \Rightarrow 3(2x)(x^2+1)^2(-\frac{x}{2}+1)-\frac{1}{2}(x^2+1)^3$ $\to f'(1) \Rightarrow 6(4)(\frac{1}{2})-4 \Rightarrow 8$ → پاسخ ۲ ۲	۹
$f(x) \Rightarrow \sin x\cos 2x$ $\quad \frac{f(\frac{\pi}{2})-f(\frac{\pi}{4})}{\frac{\pi}{2}-\frac{\pi}{4}} \Rightarrow \frac{-1-0}{\frac{\pi}{4}} \Rightarrow \frac{-4}{\pi}(1)$ $\frac{(1)}{(2)} \Rightarrow -1 \Rightarrow \frac{\frac{-4}{\pi}}{\frac{4}{\pi}} \Rightarrow -1$ → پاسخ ۲ $g(x) \Rightarrow \sin^2 x-\cos^2 x \Rightarrow -\cos 2x$ $\quad \frac{f(\frac{\pi}{2})-f(\frac{\pi}{4})}{\frac{\pi}{2}-\frac{\pi}{4}} \Rightarrow \frac{1-0}{\frac{\pi}{4}} \Rightarrow \frac{4}{\pi}(2)$ ۲	۱۰