Assignment (1) for Numerical Analysis

1)	The polynomial has the roots: 2 of multiplicity 1, -1 of multiplicity 3 and 0 of multiplicity 2 is:				
	A	$P(x) = -2x^{2}(-x-1)^{3}(-x+2)$		$P(x) = -2x^{2}(-x-1)^{3}(-x-2)$	
		24		24 224	
	C	$P(x) = -2x^{2}(-x+1)^{3}(-x+2)$	D	$P(x) = -2x^{2}(-x+1)^{3}(-x-2)$	
2)	Lot	$f(x) = \sin(\pi x) \cdot \sin[\pi h]$ When 1 < 2.		and 2 < h < 2 the Dispetion method	
2)		Let $f(x) = \sin(\pi x)$ on $[a, b]$. When $-1 < a < 0$ and $2 < b < 3$, the Bisection method			
	cor	converges to 2 if:			
	A	a + b > 2	В	a + b < 2	
	С	a + b = 2	D	a + b =0	
	C	a + b = 2	ע	a + D = 0	
2)					
3)	Let $f(x) = (x-1)^{10}$, $P = 1$, $P_n = 1 + \frac{2}{n}$. Then the minimum number of iterations needed				
		achieve $ P-P_n < 10^{-3}$ equal:			
	10 8	$\frac{\text{actileve}}{ r-r_n } \leq 10 \text{equal.}$			
	A)	2000	В	2001	
	C)	1000	D	1001	
4)	Let	Let A be a given positive constant and $g(x) = 3x - Ax^2$. An interval for which fixed-			
• /		oint iteration converges, provided P_0 is in that interval:			
	point iteration converges, provided F_0 is in that interval.				
			ı		
	A	[1 2]	В	[1 2]	
		$\left[\frac{1}{2A},\frac{2}{3A}\right]$		$\left[\frac{1}{A}, \frac{2}{A}\right]$	
	\mathbf{C}	[1 3]	D	[1 2]	
	C	$\left[\frac{1}{A}, \frac{3}{A}\right]$	D	$\left[\frac{1}{3A}, \frac{2}{A}\right]$	
5)	Let $f(x) = 3^{3x+1} - 7 \cdot 5^{2x}$. If Newton's method is used to find the zero of the function				
	with $P_0 = 11$, then $P_2 =$				
		U 7 - 2			
	٨		D	11.000720040155250	
	A	11.009438040155250	В	11.009738040155250	
		11.007130010133230			
	С	11.009438935966259	D	11.009738935966259	