Wielomian Newtona różnicowy

(3.1)

x	y	I rzed		
0.1	-1			
0.3	1.2	$\frac{1.2-(-1)}{0.3-0.1}=\frac{2.2}{0.2}=11$		
0.6	1.0	$\frac{1.0-1.2}{0.6-0.3}=\frac{-0.2}{0.3}=-0.66$	$\frac{-0.66-11}{0.6-0.1}=\frac{-11.66}{0.5}=-23.32$	
0.8	1.5	$\frac{1.5-1.0}{0.8-0.6}=\frac{0.5}{0.2}=2.5$	$\frac{2.5-(-0.66)}{0.8-0.3}=6.32$	$\frac{6.32-(-23.32)}{0.8-0.1}=42.34$

$$WN(x) = y_0 + f(x_0x_1)\cdot(x_1-x_0) + f(x_0x_1x_2)(x_2-x_0)(x-x_1) +$$

$$= y_0 + f(x_0x_1)\cdot(x-x_0) + f(x_0x_1x_2)(x-x_0)(x-x_1) + f(x_0x_1x_2x_3)\cdot (x-x_0)(x-x_1)(x-x_2)$$

$$= -1 + 11(x-0.1) + (-23.32)(x-0.1)(x-0.3) + 42.34(x-0.1)(x-0.3)(x-0.6)$$

obliczenia dla $x = 0.55$

$$-1 + 11(0.55-0.1) + (-23.32)(0.55-0.1)(0.55-0.3) + 42.34(0.55-0.1)*$$
$$*(0.55-0.3)(0.55-0.6) =$$

$$= -1 + 11(0.45) + (-23.32)(0.45)(0.25) + 42.34(0.45)(0.25)(-0.05) =$$

$$= -1 + 4.95 + (-2.6235) + (-0.2381625) = 1.0884$$

wart. w punkcie $x = 0.55$