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Zestaw 4 Zadanie 6

Utworzono wielomian interpolacyjny oparty na tabelce z zadania 6N z zestawu 4.

```
In[1]:= x0 = -1.2300; y0 = 1.5129;  
x1 = -1.1900; y1 = 1.4161;  
x2 = -0.7400; y2 = 0.5476;  
x3 = 0.1100; y3 = 0.0121;  
x4 = 2.5600; y4 = 6.5536;
```

```
In[6]:= fwi[t_] := N[ y0  $\frac{(t - x_1)(t - x_2)(t - x_3)(t - x_4)}{(x_0 - x_1)(x_0 - x_2)(x_0 - x_3)(x_0 - x_4)}$  +  
y1  $\frac{(t - x_0)(t - x_2)(t - x_3)(t - x_4)}{(x_1 - x_0)(x_1 - x_2)(x_1 - x_3)(x_1 - x_4)}$  +  
y2  $\frac{(t - x_0)(t - x_1)(t - x_3)(t - x_4)}{(x_2 - x_0)(x_2 - x_1)(x_2 - x_3)(x_2 - x_4)}$  +  
y3  $\frac{(t - x_0)(t - x_1)(t - x_2)(t - x_4)}{(x_3 - x_0)(x_3 - x_1)(x_3 - x_2)(x_3 - x_4)}$  +  
y4  $\frac{(t - x_0)(t - x_1)(t - x_2)(t - x_3)}{(x_4 - x_0)(x_4 - x_1)(x_4 - x_2)(x_4 - x_3)}$   
];
```

```
In[7]:= fwi[t]
```

```
Out[7]= 15.1988 (-2.56 + t) (-0.11 + t) (0.74 + t) (1.19 + t) -  
16.1379 (-2.56 + t) (-0.11 + t) (0.74 + t) (1.23 + t) +  
0.885364 (-2.56 + t) (-0.11 + t) (1.19 + t) (1.23 + t) -  
0.00333543 (-2.56 + t) (0.74 + t) (1.19 + t) (1.23 + t) +  
0.0570334 (-0.11 + t) (0.74 + t) (1.19 + t) (1.23 + t)
```

```
In[8]:= Print["Jawne współczynniki wielomianu:"];  
Expand[fwi[t]]
```

Jawne współczynniki wielomianu:

```
Out[9]=  $-3.00975 \times 10^{-16} + 1.31284 \times 10^{-14} t + 1. t^2 + 4.02456 \times 10^{-15} t^3 - 2.47719 \times 10^{-15} t^4$ 
```