E09 - ANN

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1 Polinômios de Lagrange - Implementação

```
Xi = [i/10 for i in range(-50,25,5)]
Yi = [0.11, -1.04, -5.00, 4.97, 0.74,
      -2.15,  3.30, -0.92,-4.79, 1.99,
       1.71,  3.68,  2.81,-3.71,-1.10]

grau = len(Yi)
Ai = [1 for i in range(grau)]

for i in range(grau):
    t = 1
    for j in range(grau):
        if i != j:
            t *= (Xi[i]-Xi[j])
    Ai[i] = Yi[i] / t
for i in range(grau):
    print("a_{{{}}}={:.15f}".format(i, Ai[i]))
```

2 Resposta

$a_{14} = -0.000000206730365$
$a_{6} = 0.001862433862434$
$a_{2} = -0.000085511196622$
$a_{7} = 0.000593398841018$
$a_{9} = -0.000748736037625$
$a_{3} = -0.000339992517770$
$a_{8} = -0.002703350970018$
$a_{4} = 0.000139212228101$
$a_{12} = 0.000048057292502$
$a_{10} = 0.000321693121693$
$a_{13} = 0.000009761431984$
$a_{5} = 0.000808935920047$
$a_{0} = 0.000000020673037$
$a_{11} = -0.000251744962856$
$a_{1} = 0.000002736358292$