**Numerical Par Gamma Intermediate results – PV999**

I’m considering pillars from 35 to 39 only (from 20Y to 50Y, the maturity of the trade is in 26Y)

1. **Gamma Point:**

The formula used to calculate Gamma Points is (for example for pillar 50Y):

1. **Squares**

(Each square is actually in the spreadsheet a value equal to the sum of the relevant elements in the matrix, i.e. an empty square is not a relevant element)

The formula used to calculate GammaSquares is (for example for pillar 50Y):

1. **CrossGamma**

(Each CrossGamma is actually in the spreadsheet a value equal to the sum of the relevant elements)

The formula used to calculate CrossGamma is

1. **Gamma**

The formula used to calculate Gamma is

For all i, apart from i = 39