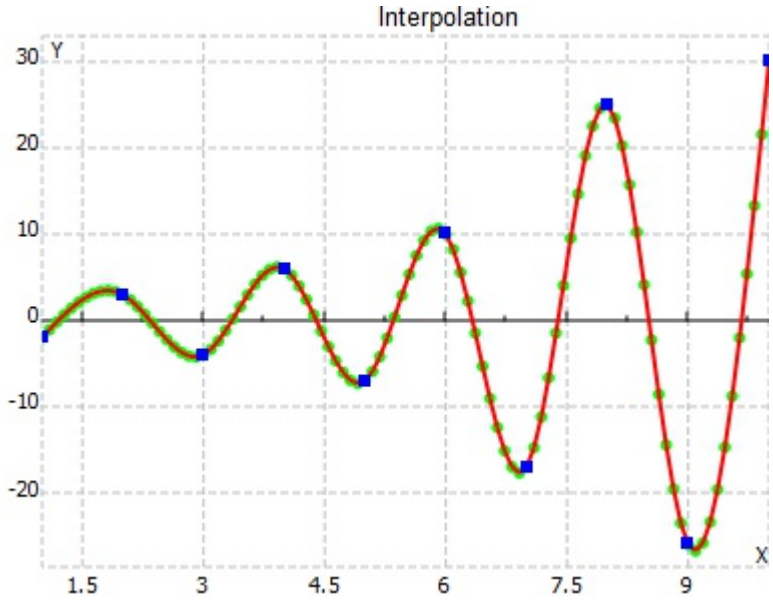
Excel export

Use the data stored in the variable **a** to generate the cubic spline interpolation above the given points. Export the interpolation y value data, for the inner points are defined in the variable c, in the interpolation.xlsx excel file.

$$a := \begin{bmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ -2 & 3 & -4 & 6 & -7 & 10 & -17 \end{bmatrix}$$



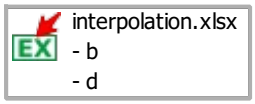

```
export(x , y)
{
  1  rez:= allocate vector(size(y) , true)
     for(i:=0 , i<size(y) , i+=1)
  2  {
       1  rez[i] := cubicspline(x , y[i])
     }
  3  return(rez)
}
```

$$c := \begin{bmatrix} 1.5 & 2.4 & 3.6 & 4.8 & 5.9 & 9.1 & 8.46 \end{bmatrix}$$

$$d := sort(c , "a")$$

$$b := export(a , d)$$

$$b = \begin{bmatrix} -2 & 2.424 & -0.694 & 3.731 & -6.810 & 10.685 & -3.001 \end{bmatrix}$$



Excel exports the object, exporting data from the variables b and d to interpolation.xlsx file

Excel import

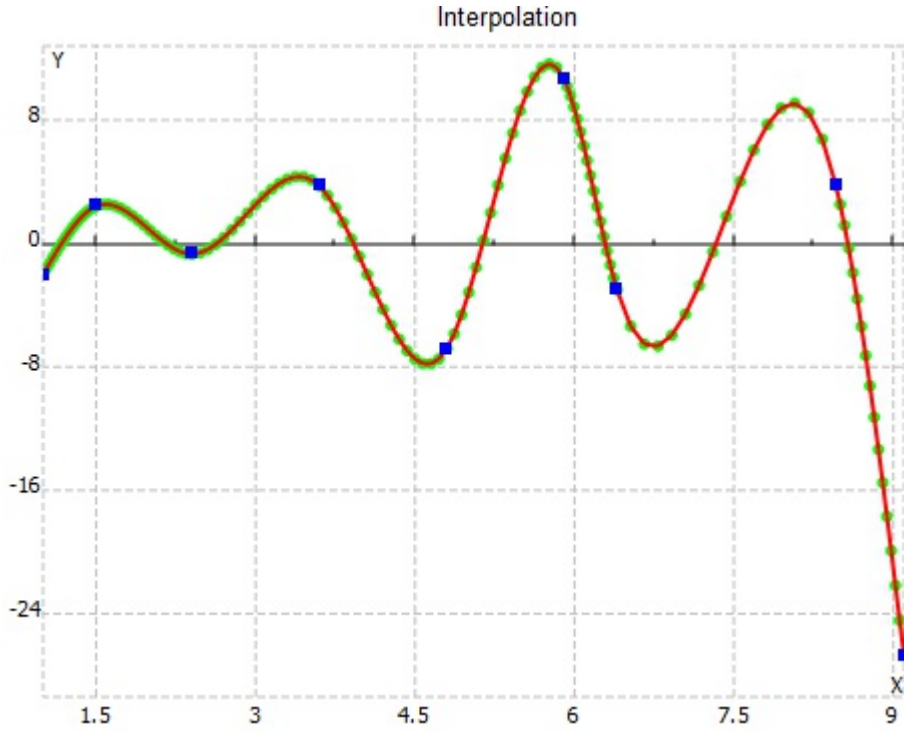
Use the data exported in the Excel export example to plot the graph and to interpolate it. For the insertion of data we shall use the Excel import object to import data into the variable **x**.

$x := 0$

interpolation.xlsx
- x

Importing data from the file interpolation.xlsx to variable x

$$x = \begin{bmatrix} 1 & -2 \\ 1.5 & 2.424 \\ 2.4 & -0.694 \\ 3.6 & 3.731 \\ 4.8 & -6.810 \\ 5.9 & 10.685 \\ 6.4 & -3.001 \\ 8.46 & 3.751 \\ 9.1 & -26.719 \end{bmatrix}$$



After we have imported the data, we have used interpolation to tie up the nodes and to reconstruct the graph.