1. In this problem, you will write two functions. The first, called “myDet2,” will take in a 2x2 matrix and return the determinant. The second, named “MyDet3,” will take in a 3x3 matrix and return the determinant, which is calculated using myDet2. Here are the details:

(a) (3 points) The determinant of a 2x2 matrix \[
\begin{pmatrix}
a & b \\
c & d
\end{pmatrix}
\]
is just \(a \cdot d - b \cdot c\). Have “myDet2” take in a matrix called \(A\) and return this determinant. Also, test it on the input \(\begin{pmatrix} 2 & 1 \\ 3 & 4 \end{pmatrix}\) – you should get 5.

(b) (3 points) The determinant of a 3x3 matrix is a bit more difficult. Let

\[
A = \begin{pmatrix}
a_{11} & a_{12} & a_{13} \\
a_{21} & a_{22} & a_{23} \\
a_{31} & a_{32} & a_{33}
\end{pmatrix}
\]

Then the determinant of \(A\) is given by \(\det(A) = a_{11} \cdot \det(A, 1, 1) - a_{12} \cdot \det(A, 1, 2) + a_{13} \cdot \det(A, 1, 3)\), where \(\det(A, i, j)\) is the determinant of the matrix you get when you delete row \(i\) and column \(j\) from \(A\). For this part of the problem, have “myDet3” take in a 3x3 matrix \(A\) and evaluate its determinant, making three calls to “myDet2” along the way. The Maple functions DeleteRow() and DeleteColumn() (in the LinearAlgebra package) will be useful. Test your function on

\[
A = \begin{pmatrix}
1 & 2 & 3 \\
2 & 5 & 6 \\
3 & 3 & 2
\end{pmatrix}
\]

– you should get -7.

2. (4 points) Write a recursive function (one that calls itself) called “sumSqr” to add up the first \(N\) integers, where \(N\) is the only argument (input). To check this, the call \(\text{sumSqr}(10)\) should spit out 385.