Q1.
ANS: A ‘rounding error’ has been introduced.

Q2.
ANS: Because the numbers are stored as floating points, each value is assigned a precise number of bits to represent them, based on the accuracy level. As a result, when subtracting and adding two numbers with a substantial difference in their powers, one of the terms is deleted.
There aren't enough bits to represent the true floating number, hence the calculation is inaccurate.
need to store additional bits (past its capability). In test 2, the pivot value of 0.01 is used. Because it is substantially less than -1, it is ignored in the calculations, resulting in rounding error.

Q3.
ANS: By reordering the rows so that the largest value is used during the pivot, partial pivoting reduces this mistake. As a result, the rounding error is lowered since the distinction between the two values utilized in the computation is smaller, reducing the rounding error of the final floating number.
This provides more precise results for the x matrix. This is demonstrated in test 2 by using a pivot of 1.01 and 1 instead of 0.01 which is not dropped off during the calculations.