

Submit your work in a single document in either MS Word or PDF format.

All calculations must be shown in order to gain maximum marks.

The indicative marking scheme is shown below.

10082828 identification number is an 8-digit number.

For instance, $d_7 d_6 d_5 d_4 d_3 d_2 d_1 d_0$ where $d_i : i = 0, 1, 2, 3, 4, 5, 6, 7$ is the multiplier for 10^i :
 $i = 0, 1, 2, 3, 4, 5, 6, 7$.

1. Compute the integer value $uID = (d_7 d_6 d_5 d_4 d_3 d_2 + 100)$.
2. Calculate the 32-bit two's complement sequence for $(-uID)$.
3. Compute the real value $uIDf = (d_7 d_6 d_5 d_4 d_3 d_2)/300$.
4. Calculate the 32-bit floating-point normalised sequence for $(-uIDf)$.

Produce a Java implementation to implement the requirements of Question 1, that is, to perform the 32-bits two complement and 32-bit floating-point conversion of a given number.
