1. Convert the following numbers to IEEE single-precision format.
   a) 9
   b) -8
   c) 128

2. Write a program, in the assembly language explained in class, that
   executes the following computation: \( c = a \times b \).

3. Divide the program written in question 3 into pages. Each page can
   store up to 4 instructions or data values. Remember to transform
   the absolute addresses of the original program to the format
   \(<\text{page}, \text{displacement}>\).

4. What is virtual memory?

5. In a virtual memory addressing mechanism, why do we need a TLB?

6. When there is a page fault, how many I/O operations are executed