

Mh4718 Mid-Term Study Guide

The exam is on Wednesday 12th of October at 11.00 in T115

1. Problems such as those in Worksheets 1,2,3 and 4.
2. Explain why the displayed value of a given formula in an Excel spreadsheet happens not to be exact.
3. Determine the number of digits in the base ten place-value representation of a given integer.
4. Determine the number of decimal places, leading zeros and significant figures in the base ten place-value representation of a rational number.
5. Determine the contents of the 4 bytes used to store given integers.
6. Given the contents of the 4 bytes used to store an integer, determine the integer in base ten notation.
7. Determine the largest positive integer that can be stored. Explain your answer.
8. Determine the contents of the 4 bytes used to store given floats.
9. Given the contents of the 4 bytes used to store a float, determine the value stored in base ten notation.
10. What are the largest and smallest positive numbers that can be stored as floats. Explain how the rules change in order to facilitate the storage of numbers closer to zero.
11. Determine the value that is actually stored when a value is assigned to a float type variable. (e.g. if a program has the assignment **float x = 0.2** what value is actually assigned to x?)
12. Determine the error in the storage of a given float.
13. Determine the output of a given C++ program.