MATH1050 Proof-writing Exercise 2 Index of Comments

1. **CR.**

   You are cramming two or more ideas into the same line, thus making the whole line unclear.

2. **DEF.**

   Look up the definition. (In this case, it is the definition of strictly increasing.) You are not adhering to definition in your argument, or you have missed out key logical features in the definition. For this reason, your argument is deemed wrong.

3. **MA.**

   At least part of the assumptions is missing. But you are going to use these assumptions in the argument. The reader is not responsible to write out the missing assumptions for you, and will simply regard your argument as wrong when you are applying the 'missing assumptions'.

4. **QF.**

   At least one of the things described below has happened:

   (a) When you are introducing a new object which you are going to denote by k through the statement

   'there exists some $c \in (a,b)$ such that $f(b) - f(a) = (b-a)f'(c)$.'

   you must state this line in full. It is wrong to just write something like

   '$c \in (a,b)$, $f(b) - f(a) = (b-a)f'(c)$.'

   (b) You have misunderstood the logical structure and the mathematical content in

   'there exists some $c \in (a,b)$ such that $f(b) - f(a) = b - a$.'

   You have ignored the ideas of 'existence' of the object denoted by the symbol c, and/or its dependence on the objects a, b.

   This matters in the logical structure of the subsequent lines of the argument. Your subsequent argument fails entirely because of it.

   (c) This statement in which the quantifier 'there exist' has appeared is not stated in an appropriate way: its logical structure has not been given due respect.

5. **SISU.**

   'Since' (or 'because') is different from 'suppose' (or 'assume'). Look up the entries in the dictionary. Do not confuse these words when you read and/or write.

6. **SUP.**

   Use the word 'suppose' for indicating what you are supposing (or supposing in extra) here.

7. **WD.**

   The deduction at this place is wrong.