Time: 20 minutes   Name: _____

Instructor: Dr. Edward Doolittle   Student #: _____

(marks)   Please do questions 1 and 2. You have 10 minutes to do each question, for a total of 20 minutes for the quiz. A non-programmable calculator of the type mentioned in the course outline is allowed. If you finish early, I suggest you check your work thoroughly. **Please do not disturb your colleagues by climbing over them while they are trying to write the quiz.**

(10)   1. Evaluate the limit

$$\lim_{h \to 0} \frac{(5+h)^{-1} - 5^{-1}}{h}$$

You do not have to indicate the limit laws used (unless you do something unusual).

(10)   2. Find all discontinuities of the function

$$f(x) = \begin{cases} \dfrac{x-3}{2x^2-5x-3} & \text{if } x \neq 3 \\ 1/7 & \text{if } x = 3 \end{cases}$$

and identify the type of each of the discontinuities found.