You start using a new computer, which has an implementation of ML. You write a new ML program which is intended to produce a result of type \texttt{int}, i.e. an integer. You run it, and see on your screen (which we assume works properly) the following response:

\begin{center}
1.99 : int
\end{center}

Discuss the following as possible reasons for the response:

\begin{enumerate}
\item your program is faulty
\item the computer’s calculation with real numbers is inaccurate
\item the ML implementation is faulty
\item ML is a badly designed language
\end{enumerate}

As part of your answer, discuss the assertion that “a type system is a way of ensuring that every program does what it was supposed to do”. [20 marks]