Let $a$ and $b$ be rational variables. Define procedure $P$ as

$$P = \langle x, y: \text{rat} \rightarrow \begin{cases} a := x & \text{if } x=0 \\ \text{else } a := xy, \ a := axy \end{cases} \rangle$$

(a) What is the exact precondition for $a' = b'$ to be refined by $P a (1/b)$?

(b) Discuss the difference between “eager” and “lazy” evaluation of arguments as they affect both the theory of programming and programming language implementation.