Let $x$ and $y$ be rational variables. Define program \textit{zot} by the fixed-point equation
\[\text{zot} = \begin{cases} x = y & \text{then } y := 0 \\ \text{else } x := (x+y)/2. \end{cases} \text{ zot fi}\]

(a) Add recursive time.
\[\text{zot} = \begin{cases} x = y & \text{then } y := 0 \\ \text{else } x := (x+y)/2. \\ t := t+1. \end{cases} \text{ zot fi}\]

(b) Give two solutions to this equation (with recursive time added) (considering \textit{zot} as the unknown). (No proof needed.)
\[x = y \Rightarrow x' = x \land y' = 0 \land t' = t \]
\[\text{if } x = y \text{ then } x' = x \land y' = 0 \land t' = t \text{ else } x' = y' = 17 \land t' = \infty \text{ fi}\]

(c) The definition of \textit{zot} makes it a solution (fixed-point) of an equation. What axiom is needed to make \textit{zot} the weakest solution (weakest fixed-point)?
\[\forall x, y, t, x', y', t'. \ Z = \begin{cases} x = 0 & \text{then } y := 0 \\ \text{else } x := (x+y)/2. \\ t := t+1. \end{cases} \text{ Z fi}\]
\[\Rightarrow (\forall x, y, t, x', y', t'. \ Z \Rightarrow \text{zot})\]