## Answer on Question \#42451 - Math - Calculus

## Question

Find the indicated limit, if it exists.
limit of $f$ of $x$ as $x$ approaches 8 where $f$ of $x$ equals $x$ plus 10 when $x$ is less than 8 and $f$ of $x$ equals 10 minus $x$ when $x$ is greater than or equal to 8


#### Abstract

Answer

The limit does not exist. However there are left and right limits. When $x$ approaches 8 from the left, the left limit is $8+10=18$. When $x$ approaches 8 from the right, the right limit equals $10-8=2$. But 18 not equal 2 . Therefore limit does not exist.


