Q1) Sketch the derivative of the given function.

Q2) The displacement (in meters) of a particle moving in a straight line is given by the equation of motion $s(t)$, where $t$ is measured in seconds. $s(t) = \frac{1}{\sqrt{t+2}}$. Find the velocity of the particle at time $t$.

Q3) Fill the blanks with (continuous, differentiable, not continuous, not differentiable, or can’t determine)
   i. if $f$ is continuous, then $f$ is ...
   ii. i. if $f$ is not continuous, then $f$ is ...
   iii. i. if $f$ is differentiable, then $f$ is ...
   iv. i. if $f$ is not differentiable, then $f$ is ...

Q4) Where is $f$ not differentiable? Give a reason for your answer.