

Concept Question 1-7: The step function $u(t)$ is considered a singularity function because it makes a discontinuous jump at $t = 0$. The ramp function $r(t)$ is continuous at $t = 0$. Yet it also is a singularity function. Why?

Although $r(t)$ is continuous at $t = 0$, its derivative $dr/dt = u(t)$ is not continuous at $t = 0$. So $r(t)$ is also a singularity function.