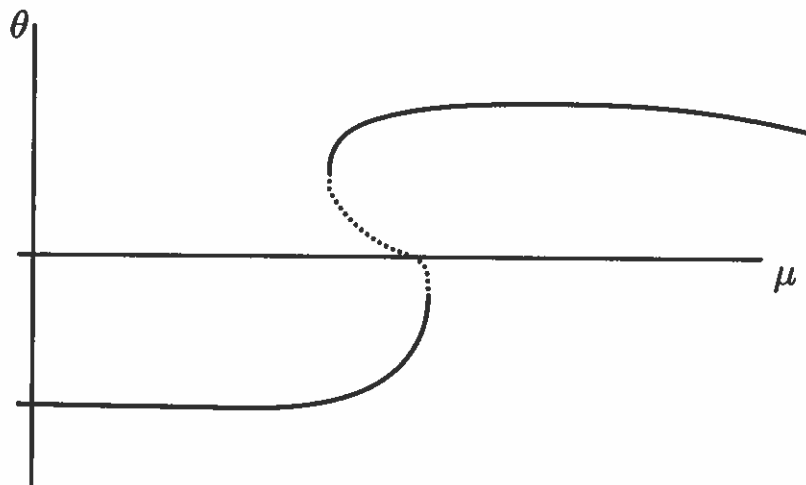


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Quiz #4

1. Consider the following potential bifurcation diagram for a differential equation $\dot{\theta} = f(\theta; \mu)$ on the circle S^1 where f is a smooth function of both variables. As usual, stable or unstable fixed points are drawn as solid or dashed curves, respectively. For this diagram, circle all bifurcation points in the (μ, θ) plane and classify what type of bifurcation they are or argue why the bifurcation diagram is impossible.



The bifurcation diagram is not consistent with the flow on a circle since it indicates one stable fixed point which is not possible.

