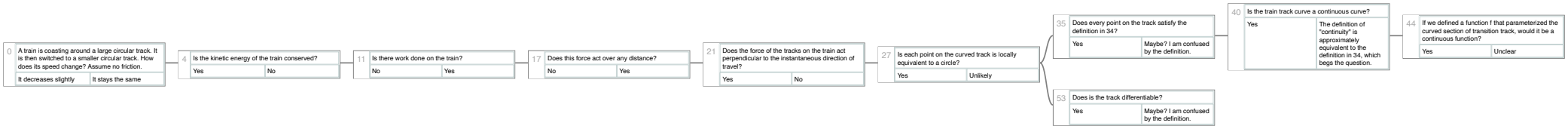
0
A train is coasting around a large circular track. It is then switched to a smaller circular track. How does its speed change? Assume no friction.
It decreases slightly
It stays the same
4
Is the kinetic energy of the train conserved?
Yes
No
11
Is there work done on the train?
No
Yes
17
Does this force act over any distance?
No
Yes
21
Does the force of the tracks on the train act perpendicular to the instantaneous direction of travel?
Yes
No
27
Is each point on the curved track is locally equivalent to a circle?
Yes
Unlikely
35
Does every point on the track satisfy the definition in 34?
Yes
Maybe? I am confused by the definition.
53
Does is the track differentiable?
Yes
Maybe? I am confused by the definition.
40
Is the train track curve a continuous curve?
Yes
The definition of "continuity" is approximately equivalent to the definition in 34, which begs the question.
44
If we defined a function f that parameterized the curved section of transition track, would it be a continuous function?
Yes
Unclear