0 Question: 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, and assume the train is a point mass

A1: The speed probably doesn't stay the same (90% confidence)

A2: The speed stays the same (95% confidence)

Arguments for A1

2 Question: Can we think of the cart at first as moving without rotation in a rotating reference frame?

A1: Yes

A2:

Arguments for A2

1 Question: Does the translational kinetic energy of the cart stay the same?

A1: No (85% confidence)

A2: Yes (96% confidence)

3 Question: If the translational kinetic energy of the cart stays the same, will its speed stay the same?

A1: Yes (95% confidence)

A2: Yes (99% confidence)