

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.

A1: It will slow down a bit. This in many cases won't even be noticeable.

A2: I'm uncertain given the information that I have whether the train will slightly slow down, stay at the same speed, or maybe even slightly speed up

Arguments for A1

1 Question: Does the train gain kinetic energy?

A1: No

A2: No, 85%

3 Question: Does the train lose kinetic energy, other than via an increase in its rotational energy?

A1: No

A2: No, 85%

5 Question: Is the increase in rotational energy generally small, and in many cases not noticeable?

A1: Yes

A2: Yes, 90%

7 Question: If I'm right about claims 1, 3 and 5, is it true that the train can't speed up and in fact it slows down a bit, and in many cases by a non-noticeable amount?

A1: Yes

A2:

Arguments for A2

2 Question: As the train moves to the smaller track, does it gain rotational energy?

A1: Yes, 99.3%

A2: Yes, 90%

4 Question: Is the kinetic + rotational energy of the train conserved as the train moves between tracks?

A1: Yes, 99.3%

A2: Yes, 80%

6 Question: If the train gains rotational energy and kinetic + rotational energy is conserved, then what happens to the speed of the train?

A1: It decreases

A2: It decreases

9 Question: Meta-debate: Given the questions and answers in this round, which is the better answer to the question?

A1: It will slow down a bit. This in many cases won't even be noticeable.

A2: I'm uncertain given the information that I have whether the train will slightly slow down, stay at the same speed, or maybe even slightly speed up