

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 gets slower

A2: It stays the same

#### Arguments for A1

1 Question: Is energy conserved?

A1: Yes

A2: Yes

2 Question: If energy is conserved, does the train get slower?

A1: Yes

A2: No

#### Arguments for A2

3 Question: Is momentum conserved?

A1: No

A2: Yes

4 Question: If momentum is conserved, does the train stay the same speed?

A1: Yes

A2: Yes