

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 FASTER (P=0.87)

A2: It slows down

Arguments for A1

3 Question: BY THE LAW OF ANGULAR MOMENTUM, ISN'T MOMENTUM CONSERVED?

A1: YES!

A2: No

4 Question: IF MOMENTUM IS CONSERVED, SINCE $MOMENTUM = MASS \times VELOCITY \times RADIUS$, SINCE THE RADIUS SHRINKS, MUSTN'T (stn't wowie) THE VELOCITY INCREASE FOR ANGULAR MOMENTUM TO BE CONSERVED???

A1: YES

A2: Yes

Arguments for A2

1 Question: Is energy conserved?

A1: I'M NOT SURE, IS IT? I THINK NOT (P=51%)

A2: Yes

2 Question: If energy is conserved, does the speed of the train decrease?

A1: PERHAPS NOT!

A2: Yes