Sidney v Sydney

At root

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0   Q (H)
A train is coasting around a large circular track. It is then switched to a smaller circular track. How does its speed change?

H | Speed gets slower   D | Speed stays constant.

Notes: [ ]

Q | Is total energy conserved?

H | Yes   D | Yes

2 Payment: H ○   D ○   None ◉   [Recurse]

Notes: [ ]

Q | Is speed the magnitude of velocity?

H | Yes   D | Yes

1 Payment: H ○   D ○   None ◉   [Recurse]

Notes: [ ]

Q | Is total energy equal to translational + rotational kinetic

H | Yes   D | Yes

3 Payment: H ○   D ○   None ◉   [Recurse]

Notes: [ ]

Q | Without a force acting parallel to velocity, does the magnitude of

H | It can   D | No

6 Payment: H ○   D ◉   None ○   [Recurse]

Notes: [ ]

Q | Does rotational kinetic energy increase?

H | Yes   D | Yes

4 Payment: H ○   D ○   None ◉   [Recurse]

Q | Is there any force acting parallel to velocity?

H | No   D | No

8 Payment: H ○   D ○   None ◉   [Recurse]

Q All else being equal, if translational kinetic energy

H Yes   D No

7 Payment: H   D   None   [Recurse]

Notes