

Mark Mark Wrapping Ball

At root

0

Q

(H)

A ball is attached to a pole by a string. The ball is swinging in a circle, and the pole is rotating freely, so that the part of the pole where the string is attached is always facing the ball. Now you stop the pole rotating, so the string starts wrapping around the pole. What happens to the speed of the ball?
(ignore effects due to gravity, assume the ball is a point mass)

H

the speed stays the same

D

the speed increases

Notes

Mark1 is the person arguing for "the speed stays the same", Mark2 is the person arguing for "the speed increases"

Mark is confused by whether or not this will be a draw. The only viable recursion seems to be on 10, which Mark1 feels like he should be able to win. However, it seems plausible to Mark1 that the current status of the debate is such that he will win

Seems plausible that simple debates with not much detail get judged sort of as draws and there's a dishonest strategy that's like "loosy goosy agree with everything H says, forcing H to recurse on one of Ds arguments"

I will say that H payed to recurse on 10 for now.

Beth thinks H would probably have won without recursion. Does recursing net increase the chances of victory?

Q

Does the energy of the ball stay the same?

H

yes

D

yes, approximately

1

Payment:

H

D

None

Recurse

Notes

Q

If the energy of the ball stays the same, does the speed stay the same?

H

yes

D

yes, approximately

2

Payment:

H

D

None

Recurse

Notes

Q

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

H

the speed stays the same

D

the speed slows down

7

Payment:

H

D

None

Recurse

Notes

Q

Is angular momentum approximately conserved?

H

no

D

yes

10

Payment:

H

D

None

Recurse

Notes

In general, Mark is confused about how clear-cut things have to be for judges to judge correctly. E.g. the below debate is roughly something like Mark2 agreeing with most of what Mark1 and Mark1 disagreeing with a lot of what Mark2 said. Should Mark1 expect to win this debate as is?

Beth points out that H's argument doesn't actually imply the answer "no". Should include some point about yes torque -> no conservation of ang momentum. Added in 36

Mark and Beth agree that H should recurse on 23.

Q

If the angular momentum is conserved, then does the ball speed up?

H

yes

D

yes

11

Payment:

H

D

None

Recurse

Notes

15

[To: 1.question](#)

D

When you say "stay the same", do you mean exactly the same or approximately the same?

H

Approximately the same.

18

[To: 2.question](#)

D

By the first usage of "stays the same" do you mean exactly the same or approximately the same"?

H

Approximately the same.

19

[To: 2.question](#)

D

By the second usage of "stays the same" do you mean exactly the same or approximately the same"?

H

Approximately the same.

16

[To: 10.question](#)

H

What do you mean by "approximately"?

D

I mean such that the answer to the question would not be impacted.