0 Question: 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)

A1: the speed increases

A2: the speed stays the same

Arguments for A1

10 Question: Is angular momentum approximately conserved?

A1: yes

A2: no

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

A1: yes

A2: yes

Arguments for A2

1 Question: Does the energy of the ball stay the same?

A1: yes, approximately

A2: yes

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

A1: yes, approximately

A2: yes

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

A1: the speed slows down

A2: the speed stays the same