

Username

Please enter your User ID below:

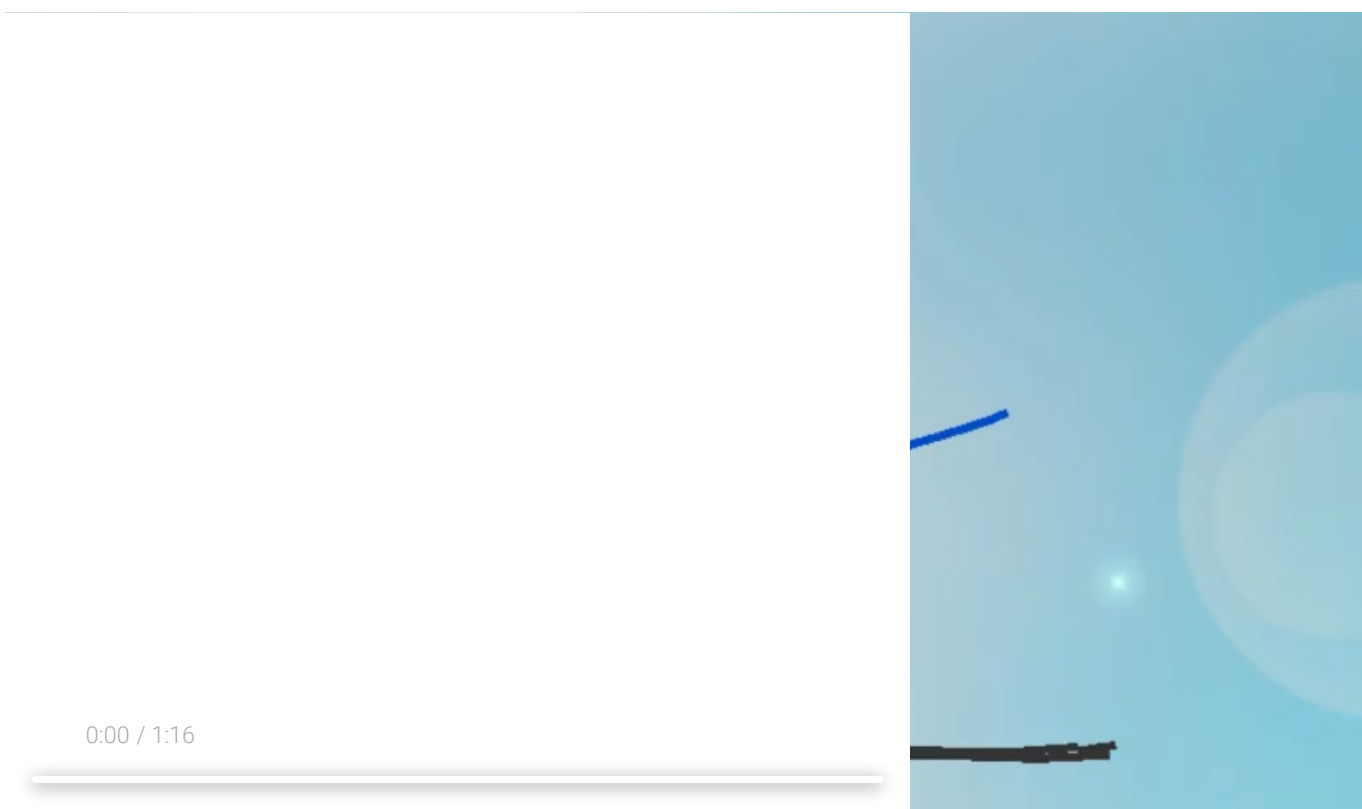
IMI abridged and random

Before we get to the physics questions, we want to know how you felt about the game. For each statement below, indicate how true that statement feels.

	Not at all true			Somewhat true			Very true
The game was fun to play.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoyed playing the game very much	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I couldn't play the game very well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I thought the game was boring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be willing to play the game again because it has some value to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I didn't put much energy into the game.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did not feel frustrated at all while playing the game.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would describe the game as very interesting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt very frustrated while playing the game.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I didn't try very hard to do well in the game.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The game did not hold my attention at all.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe playing the game could be beneficial to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think I did pretty well in the game compared to other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

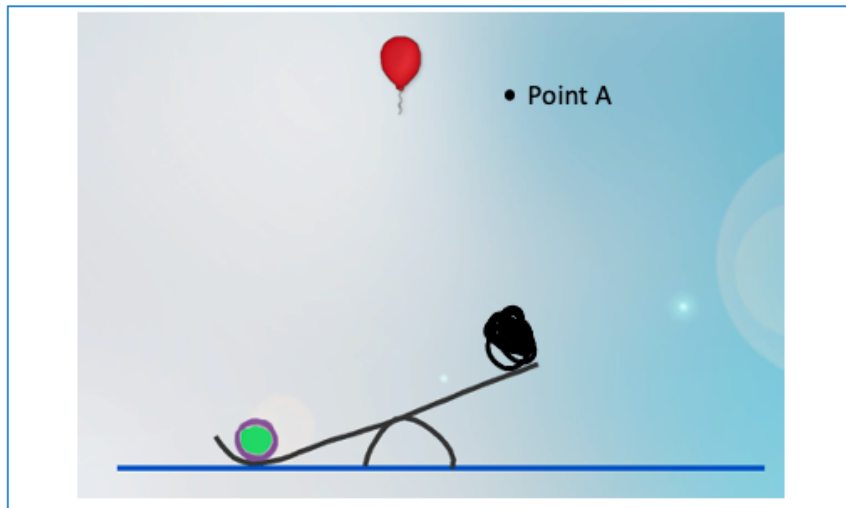
	Not at all true			Somewhat true			Very true
students.							
I put a lot of effort into the game.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think I am pretty good at the game.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with my performance in the game.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried very hard in the game.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was very relaxed while playing the game.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Near Q1 EcT Lever 1



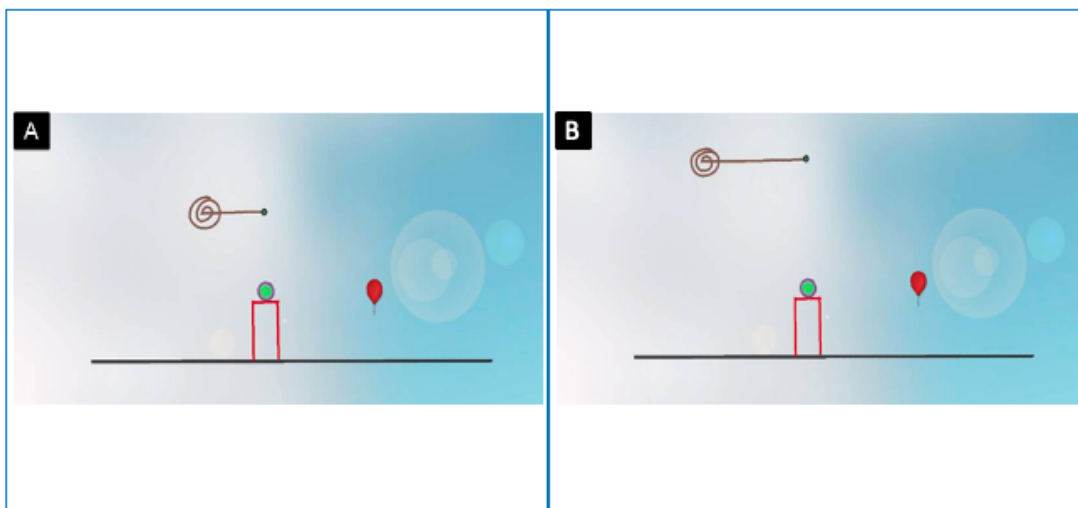
In this video, a ball is drawn at Point A. What would you change to make the green ball hit the balloon?

- ☐ Draw an object with a larger mass
- ☐ Draw an object with a smaller mass
- ☐ Draw the object closer to the center of the lever
- ☐ None of the above would help

Near Q2 EcT-Lever 2

An object is drawn resting on the right-hand side of the lever. It's just heavy enough to lift the ball up. If the object is dropped from Point A, how much energy will it transfer to the ball?

- ☐ The same as before
- ☐ More than before
- ☐ Less than before
- ☐ Not enough information

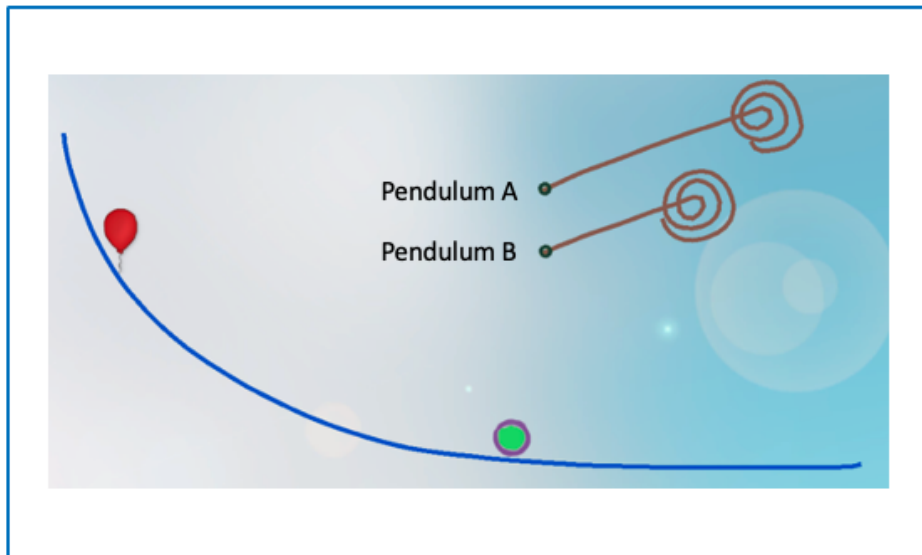
Near Q3 EcT-Pendulum 1

Both pendulums will hit the green ball. Which pendulum would you choose to solve this level?

- ☐ A

- ☐ B
- ☐ No difference
- ☐ Not enough information

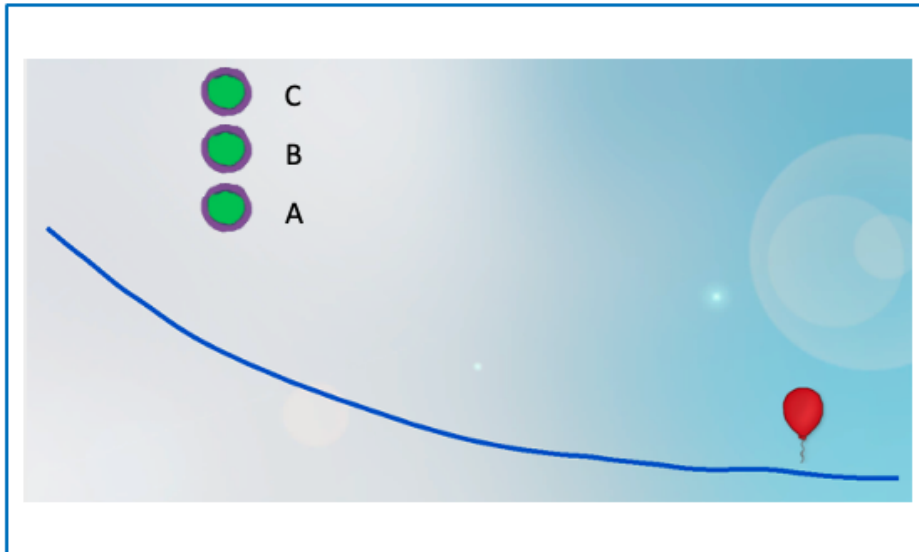
Near Q4 EcT-Pendulum 2



Both pendulums will hit the ball. Which pendulum is *more likely* to get the ball to the balloon?

- ☐ A
- ☐ B
- ☐ Both
- ☐ Neither of them

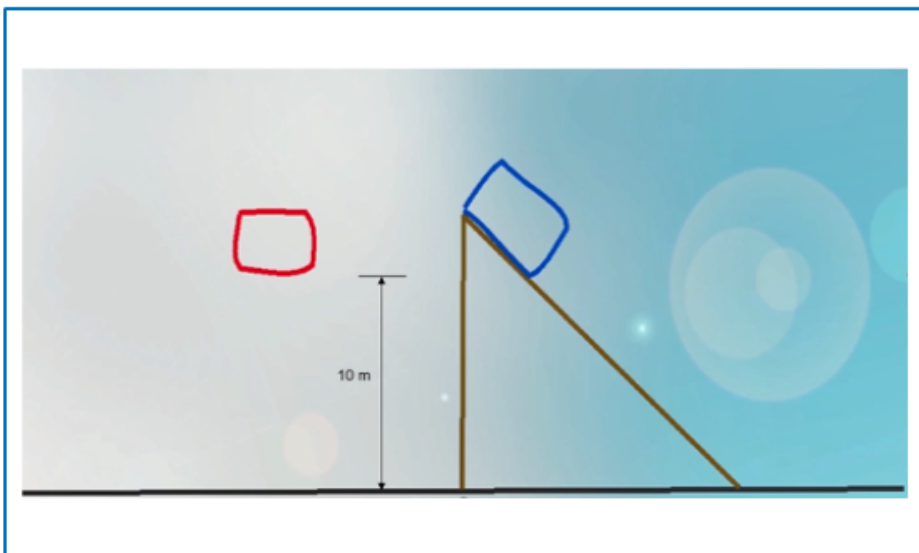
Near Q5 EcT-Ramp 1



A ball is dropped from each point shown above (A, B, C). When will the ball have the *fastest speed* as it hits the balloon?

- ☐ Dropped from point A
- ☐ Dropped from point B
- ☐ Dropped from point C
- ☐ No difference

Near Q6 EcT- Ramp 2



The red and blue boxes start at the same height. Ignoring friction, which box is moving *faster* just before hitting the ground?

- ☐ The red box
- ☐ The blue box
- ☐ No difference
- ☐ Not enough information

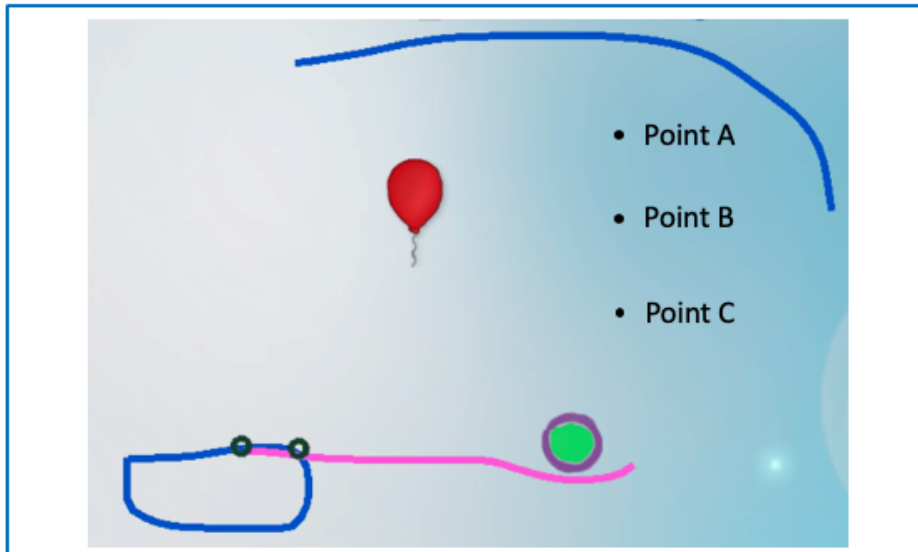
Near Q7 EcT-Springboard 1



Which method is *more likely* to make the ball hit the balloon?

- ☐ Attach a weight to the springboard
- ☐ Attach a weight to the springboard and then release
- ☐ Increase the mass of the ball
- ☐ None of the above

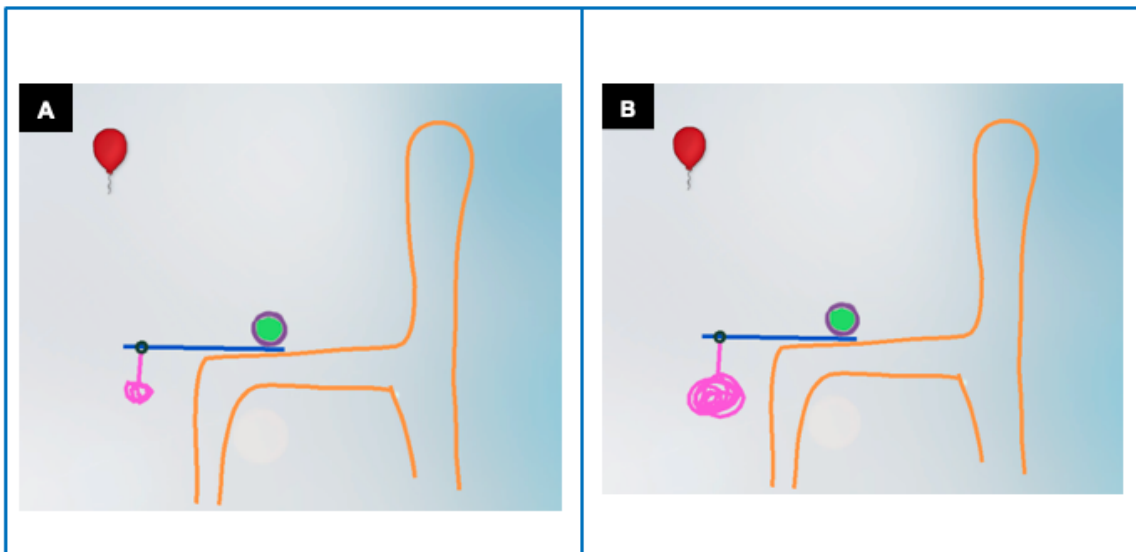
Near Q8 EcT-Springboard 2



If a mass is dropped from each point (A, B, C), what point will make the green ball hit the balloon with the *greatest energy*?

- ☐ A
- ☐ B
- ☐ C
- ☐ All points will have the same effect on the ball

Near Q12 PoT-Lever-Mass 2

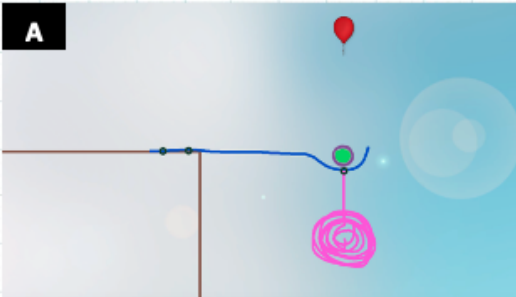
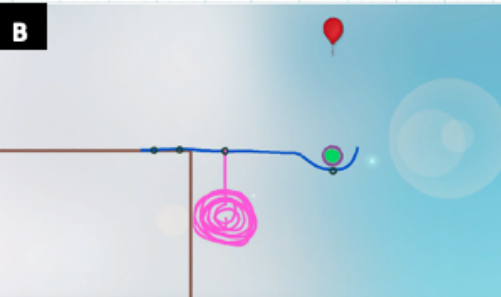



In which picture (A or B) will the green ball go higher?

- ☐ A

- ☐ B
- ☐ Both will reach the same height
- ☐ Not enough information

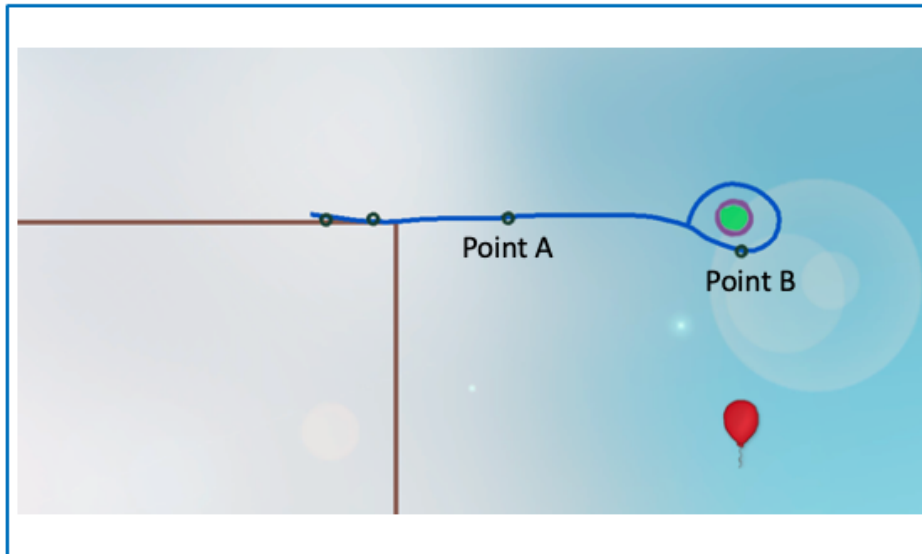
Near Q13 PoT-Springboard 1

<p>A</p> 	<p>B</p> 
<p>C</p> 	<p>Which green ball is <i>less likely</i> to reach the balloon after releasing the attached weight?</p> <p>a) A b) B c) C d) All would work</p>

Which green ball is *less likely* to reach the balloon after releasing the attached weight?

- ☐ A
- ☐ B
- ☐ C
- ☐ All would work

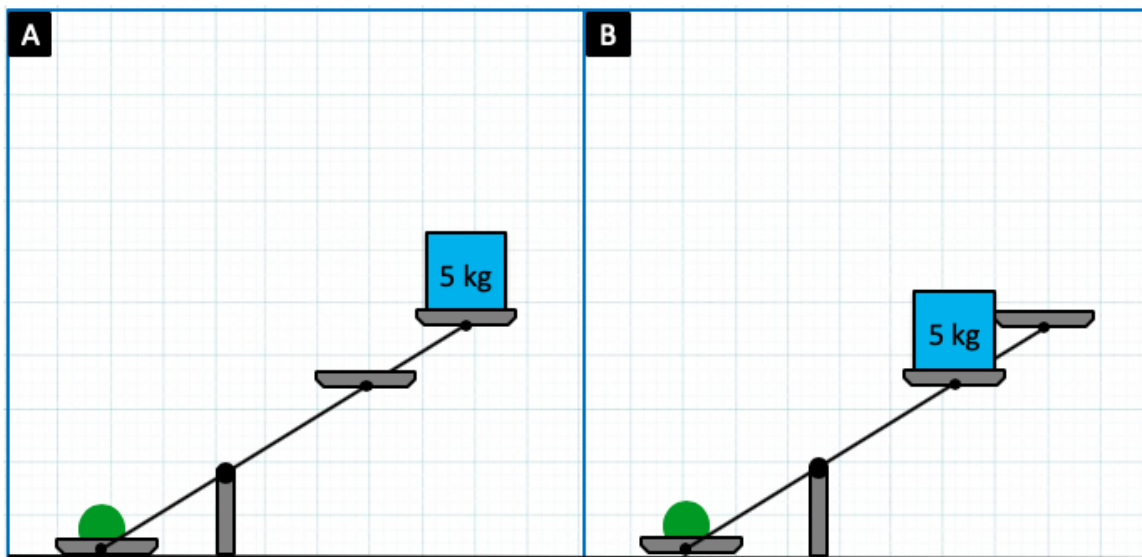
Near Q14 PoT-Springboard 2



Which one of the following solutions is *more likely* to make the ball reach the balloon?

- ☐ Attach a light weight on point B
- ☐ Attach a heavy weight on point B
- ☐ Attach a light weight on point A
- ☐ Attach a heavy weight on point A

Far Q1 EcT-Lever 1

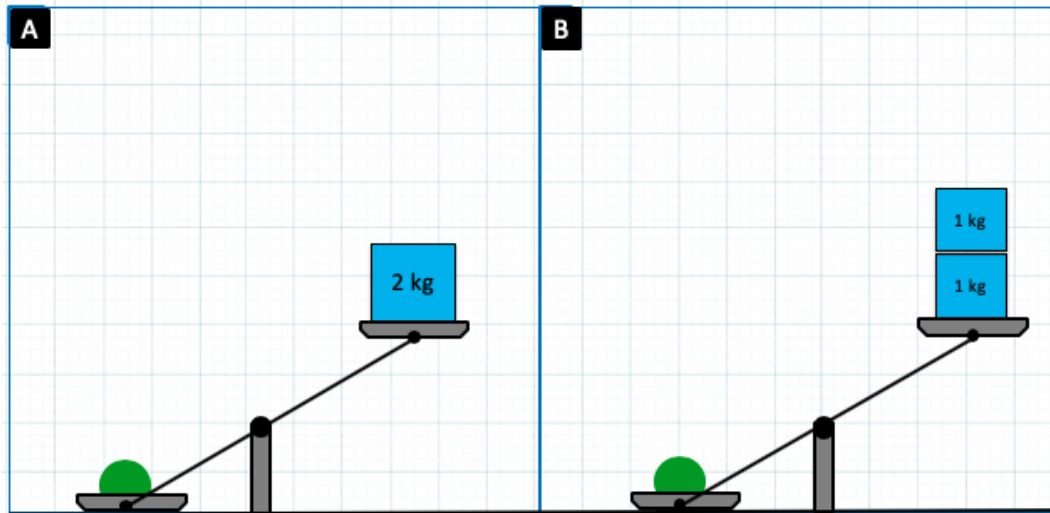


In Figures A and B, the two levers are identical. Which ball will be moving *faster* when it leaves the plate?

- ☐ The ball in picture A
- ☐ The ball in picture B

- ☐ The balls will move at the same speed
- ☐ More information is needed to answer the question

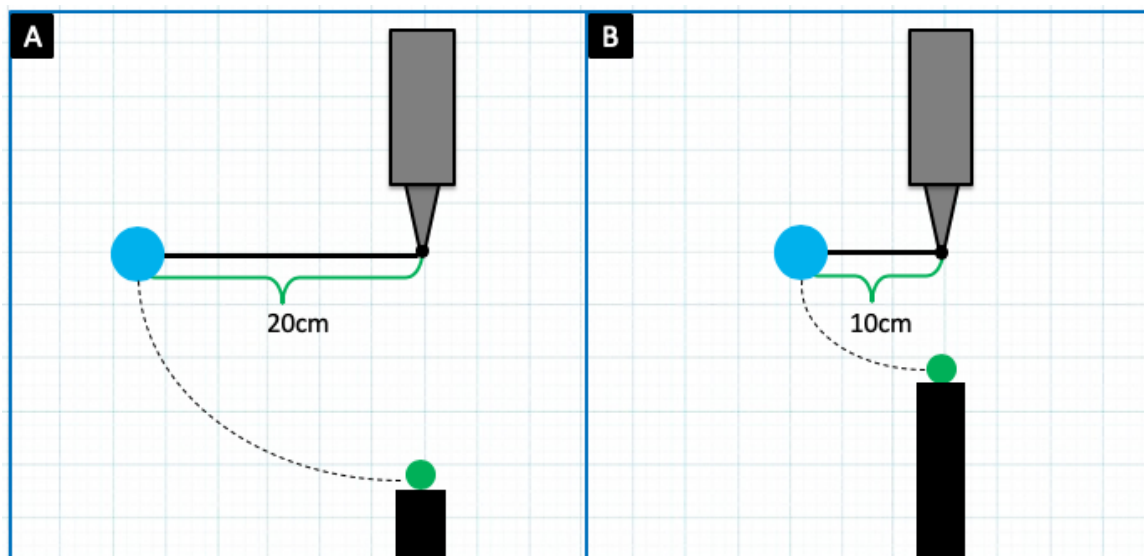
Far Q2 EcT-Lever 2



In Figures A and B, the two levers are identical. Objects are placed at the same location. Which ball will be launched *higher*?

- ☐ A will be launched higher than B
- ☐ B will be launched higher than A
- ☐ A and B will be launched the same height because both masses start at the same height
- ☐ More information is needed to answer the question

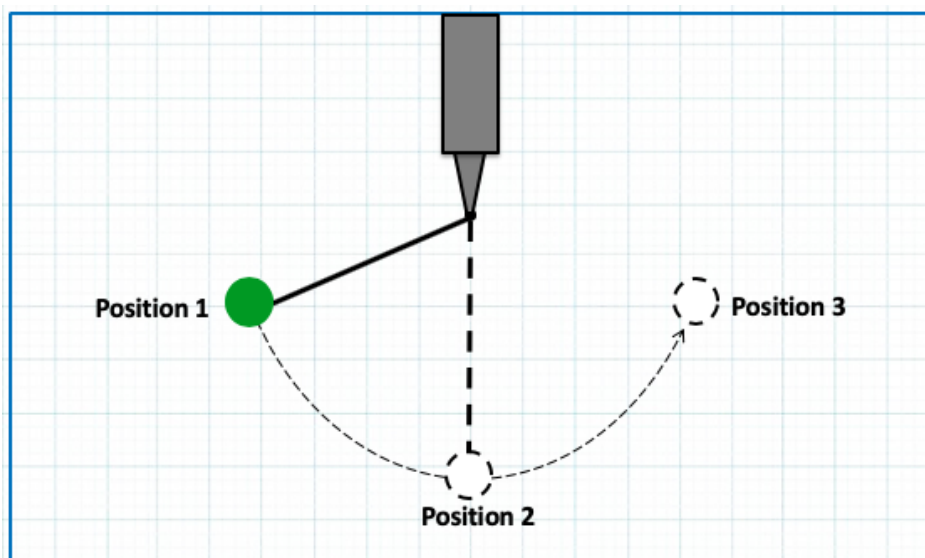
Far Q3 EcT-Pendulum 1



In Figures A and B, the pendulums have different lengths but the same mass. They are released at the same time. Which pendulum will travel faster *just before* it impacts the green ball?

- ☐ A and B will move at the same speed
- ☐ B will be faster than A
- ☐ A will be faster than B
- ☐ More information is needed to answer the question

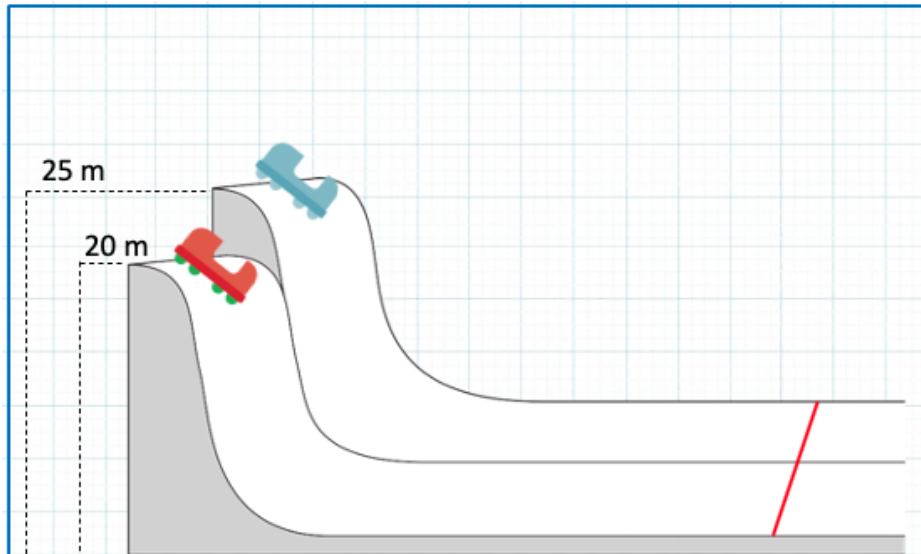
Far Q4 EcT-Pendulum 2



The pendulum swings from Position 1, passes Position 2, and arrives at Position 3. If we use a heavier ball, what is the *highest point* it will reach on its swing?

- ☐ Position 2
- ☐ Position 3
- ☐ Somewhere between Position 2 and Position 3
- ☐ Somewhere above Position 3

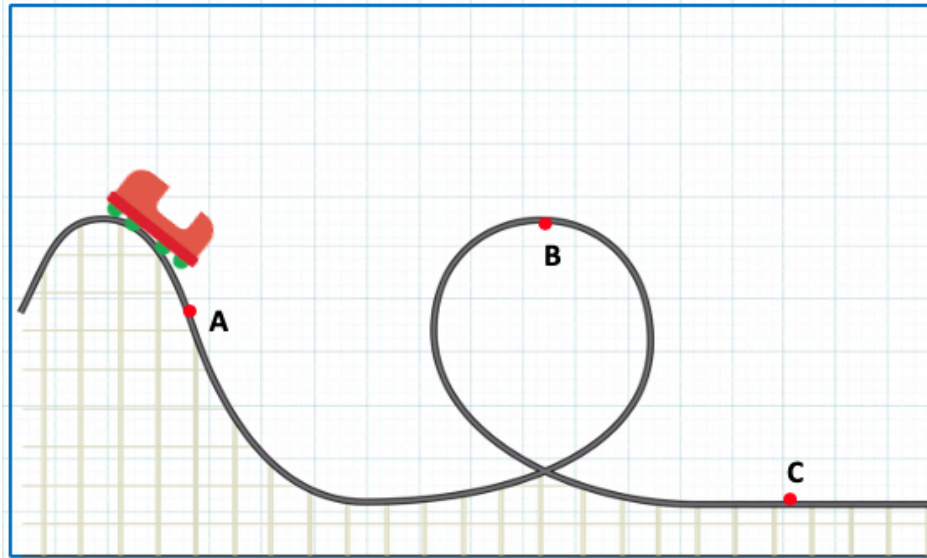
Far Q5 EcT-Ramp 1



Two identical carts are rolling down the ramp. Which cart will have *more speed* at the red line?

- ☐ The red cart
- ☐ The blue cart
- ☐ Both will have the same speed
- ☐ More information is needed

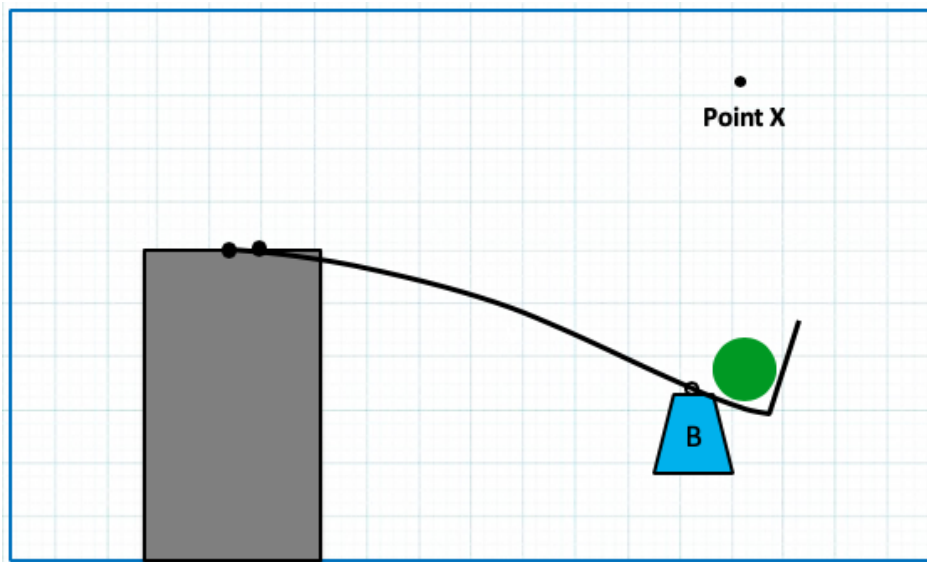
Far Q6 EcT-Ramp 2



The cart rolls down a frictionless rollercoaster. Its kinetic energy is _____.

- ☐ the least at A
- ☐ the least at B
- ☐ the least at C
- ☐ always constant

Far Q7 EcT-Springboard 1

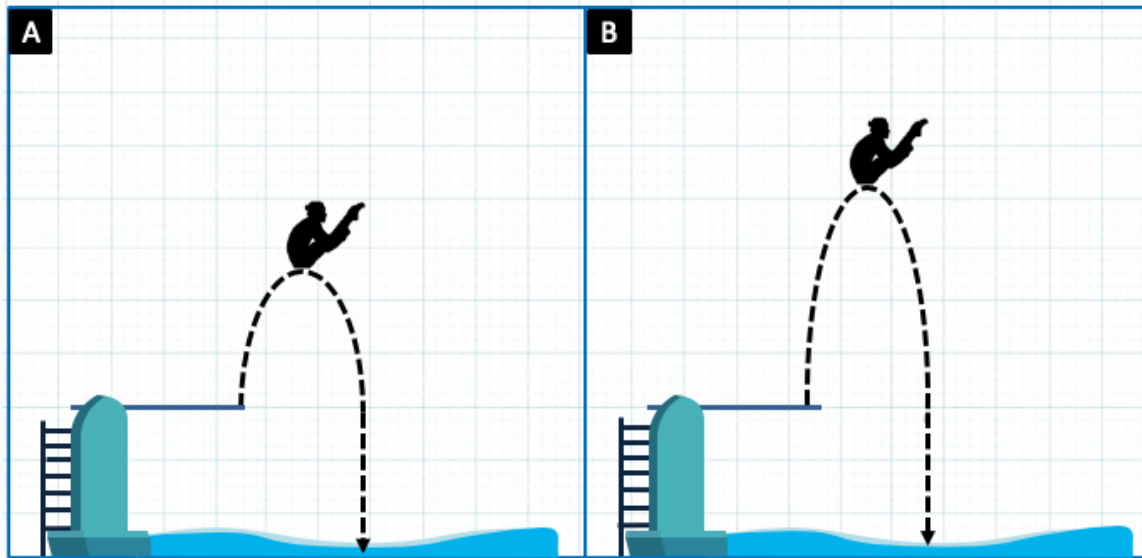


A springboard is bent down by weight B. When the weight is released, the green ball flies up into the air to point X. What would make the green ball fly *lower* than point X?

- ☐ Increase the mass of the ball

- ☐ Decrease the mass of the ball
- ☐ Increase the mass of weight B
- ☐ More information is needed to answer the question

Far Q8 EcT-Springboard 2



Nicole dove twice from a springboard. In her second dive, she jumped higher than her first dive. Which dive bent the board *less*?

- ☐ Both dives bent the board the same amount
- ☐ The first dive bent the board less than the second dive
- ☐ The second dive bent the board less than the first dive
- ☐ We don't know because she already jumped

Debrief

Please enter your User ID again:

You may have noticed while you were playing that sometimes a window opened offering a physics video to help. Here is an example of one of these physics videos:



Transfer

0:00 / 0:40



Did you see any videos like these while you were playing Physics Playground?

- ☐ Yes. I saw physics videos while I played the game.
- ☐ No. I did not see any physics videos while I played the game.

Support Questions

The following questions are only for people who saw physics videos.

The physics videos helped me solve levels.

- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Strongly disagree

The physics videos helped me answer the physics test questions.

- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree

- ☐ Somewhat disagree
- ☐ Strongly disagree

The physics videos helped me learn some physics

- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Strongly disagree

I'd prefer to play the game without the physics videos.

- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Strongly disagree

The physics videos were annoying

- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Strongly disagree

It was unclear how the physics videos were supposed to help me solve the level

- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Strongly disagree

The physics videos made me like the game more

- ☐ Strongly agree
- ☐ Somewhat agree

- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Strongly disagree

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