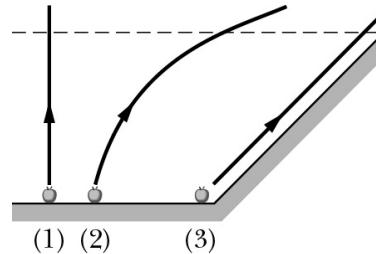


Quiz #6: Work and Energy

Problem 1 (2 points)

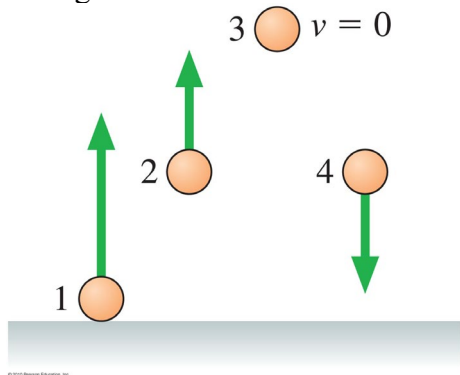
The figure below shows three rocks that are launched from the same level with the same speed. One is launched straight upward, one is launched at an angle, and one is launched along a frictionless incline. Ignoring air resistance and friction, which rock has the greatest speed when they reach the dashed line?

- a) 1
- b) 2
- c) 3
- d) all tie
- e) I have no idea but please give me 1 point :)



Problem 2 (2 points)

Rank in order, from largest to smallest, the gravitational potential energies of the identical balls 1 through 4.



Problem 3 (2 points)

Describe the energy transfers that take place as you use a slingshot to shoot a rock into the air, it rises to a peak, then falls, and finally hits the ground and stops without bouncing.

Problem 4 (4 points)

A ball is thrown off of a 75.0 m tall building with an initial speed of 28.0 m/s in the absence of air resistance.

a) With what speed does the ball hit the ground?

b) At what height will the speed of the ball be 34.0 m/s?

