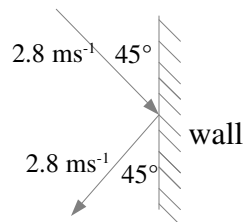


1. A giant fish is being lifted directly upwards a height of 10 m by two cables as shown below:

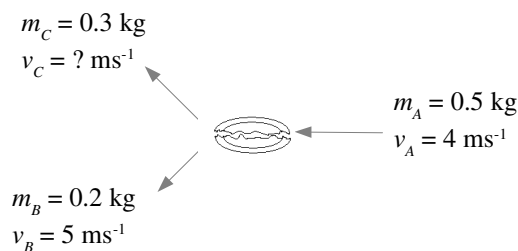


Given that the tension in each cable is 475 N, calculate the work done by each rope and therefore the total work done on the giant fish.

2. A ball of mass 3.1 kg bounces off a wall without a change in speed, as shown below.

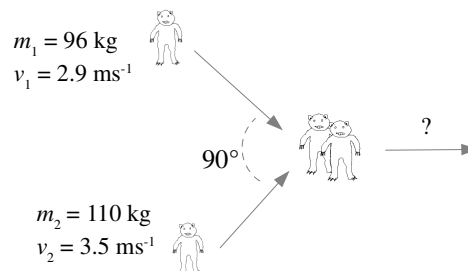


- Calculate the ball's change in velocity
 - Hence calculate the ball's change in momentum
 - Hence calculate the force the wall exerts on the ball, if the collision lasts 0.15 seconds
 - State the force the ball exerts on the wall
3. While out shooting, a gunman hit a plate from below without affecting its flight. It broke as shown below (B and C leave at right angles to each other.)



Find the speed of fragment C.

4. Two gummi bears run towards each other at right angles. After the collision, they are stuck together, as shown below.



- Calculate the final speed of the stuck bears.
- Determine whether the collision is elastic or inelastic.