

## Homework 6

Please think on the following problems:

1. A stick of length  $l$ , placed vertically on a frictionless surface starts falling down. Find the velocity of the upper end right before it hits the ground.
2. You are holding a uniform stick by its end. If you hit a stone with the other end, it will be rather painful for your hand. If you change the strategy so the point of the impact is very close to your hand, again, it will be painful. But if the point of the impact is in some magic point on the stick your hand will feel nothing. Where exactly is the magic point? (Answer “on the stick” will not be accepted 😊)