

## Friction

**Question 1** A particle is pushed, with initial velocity  $v_0$ , up a slope of angle  $\alpha$ . The friction coefficient is  $k$ . Find how far the particle will get before stopping.

*2005 paper.*

**Question 2** The velocity of a particle, which has slid down a plane tilted at an angle  $\alpha$ , is  $v$ . Assuming that the friction coefficient is  $k$ , find the height from which the particle started its motion.

*2006 paper.*