

- (b) the change in momentum of the ball, of mass 45 g, during contact of the ball with the surface,

change = N s [4]

- (c) the average force acting on the ball during contact with the surface.

force = N [2]

- 4 (a) Explain what is meant by the concept of *work*.

.....

[2]

- (b) Using your answer to (a), derive an expression for the increase in gravitational potential energy ΔE_p when an object of mass m is raised vertically through a distance Δh near the Earth's surface.

The acceleration of free fall near the Earth's surface is g . [2]