

**SECTION B**

**Answer ALL questions in the spaces provided.**

- 11** A rock falls from rest through a small distance  $s$  to the surface of Mars. The rock hits Mars with velocity  $v_M$ .

Another rock falls from rest through distance  $s$  to the surface of Earth and hits Earth with velocity  $v_E$ .

Calculate the ratio  $\frac{v_M}{v_E}$ .

acceleration due to gravity on Mars =  $0.38g$

$$\frac{v_M}{v_E} = \dots\dots\dots$$

**(Total for Question 11 = 3 marks)**