HL Paper 3

- a. Outline what is meant by a black hole. [2]
- b. An observer views a distant spacecraft that is 23.0 km from the centre of a black hole. The spacecraft contains a clock that ticks once every [3] second and the ticks can be detected by the distant observer. In 2.00 minutes the observer counts 112 ticks of the clock.

Determine the mass of the black hole.