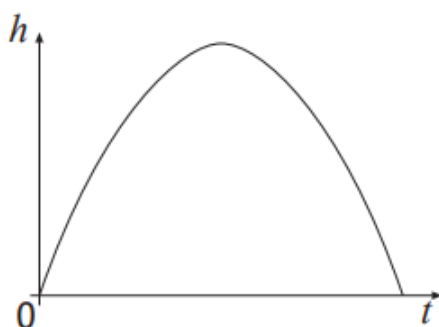The diagram below shows the path of a small rocket which is fired into the air. The height, h metres, of the rocket after t seconds is given by

$$h(t) = 16t - t^2$$

(a) After how many seconds will the rocket first be at a height of 60 metres? 4

(b) Will the rocket reach a height of 70 metres?
  Justify your answer. 3

Answers:

 (a) 6 seconds

 (b) No, because its maximum height is 64 metres.