

## QUESTION 8

After flying a short distance, an insect came to rest on a wall. Thereafter the insect started crawling on the wall. The path that the insect crawled can be described by  $h(t) = (t - 6)(-2t^2 + 3t - 6)$ , where  $h$  is the height (in cm) above the floor and  $t$  is the time (in minutes) since the insect started crawling.

- 8.1 At what height above the floor did the insect start to crawl? (1)
- 8.2 How many times did the insect reach the floor? (3)
- 8.3 Determine the maximum height that the insect reached above the floor. (4)

[8]