

## Exercise 19

For the following exercises, consider a stone tossed into the air from ground level with an initial velocity of 15 m/sec. Its height in meters at time  $t$  seconds is  $h(t) = 15t - 4.9t^2$ .

Use the preceding exercise to guess the instantaneous velocity of the stone at  $t = 1$  sec.

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### Solution

The instantaneous velocity of the stone at  $t = 1$  sec is

$$v(1) = 15 - 4.9(2)(1) = 5.2 \text{ meters/second.}$$