Example 1. *At noon, a train is 5 km past a train station and started running further away from it. It is known that the velocity of the train (in km per hour) t hours after noon is given by*

$$v(t) = 6t^2 + 2t \qquad (0 \leq t \leq 5).$$

(a) Find the position function $s(t)$ of the train at any time t $(0 \leq t \leq 5)$.

(b) How far is the train away from the station at 3 pm?