



# AUSTRALIAN MATHS TRUST

**Maths Challenge**  
**Junior: Years 7–8**  
**Practice Problem**

## **J4: The Tortoise and the Har**

A tortoise and hare take part in a 1km race. The tortoise walks a slow 5.4m/min. The hare, confident of winning, decides to hop for 10 minutes, sleep for 30 minutes, hop for 10 minutes, sleep for 30 minutes, maintaining this pattern with a casual hopping speed of 19.2m/min

## **J4: Questions**

- a. How far has each travelled in one hour?
- b. The tortoise actually wins the race. By what distance?
- c. If the hare wishes to maintain the same pattern of hopping for 10 minutes then sleeping for 30 minutes, what is the minimum hopping speed the hare will need to win the race?
- d. If the original race continued indefinitely, at what distance from the start would the hare become permanently ahead of the tortoise or vice versa?