1   Part of the sequence of triangular numbers is shown.

$$\ldots 21, \quad 28, \quad 36, \quad 45, \quad 55, \quad 66 \ldots$$

(a) Which triangular number comes directly before 21?

Answer _____ [1]

(b) Write down the smallest triangular number which is greater than 100
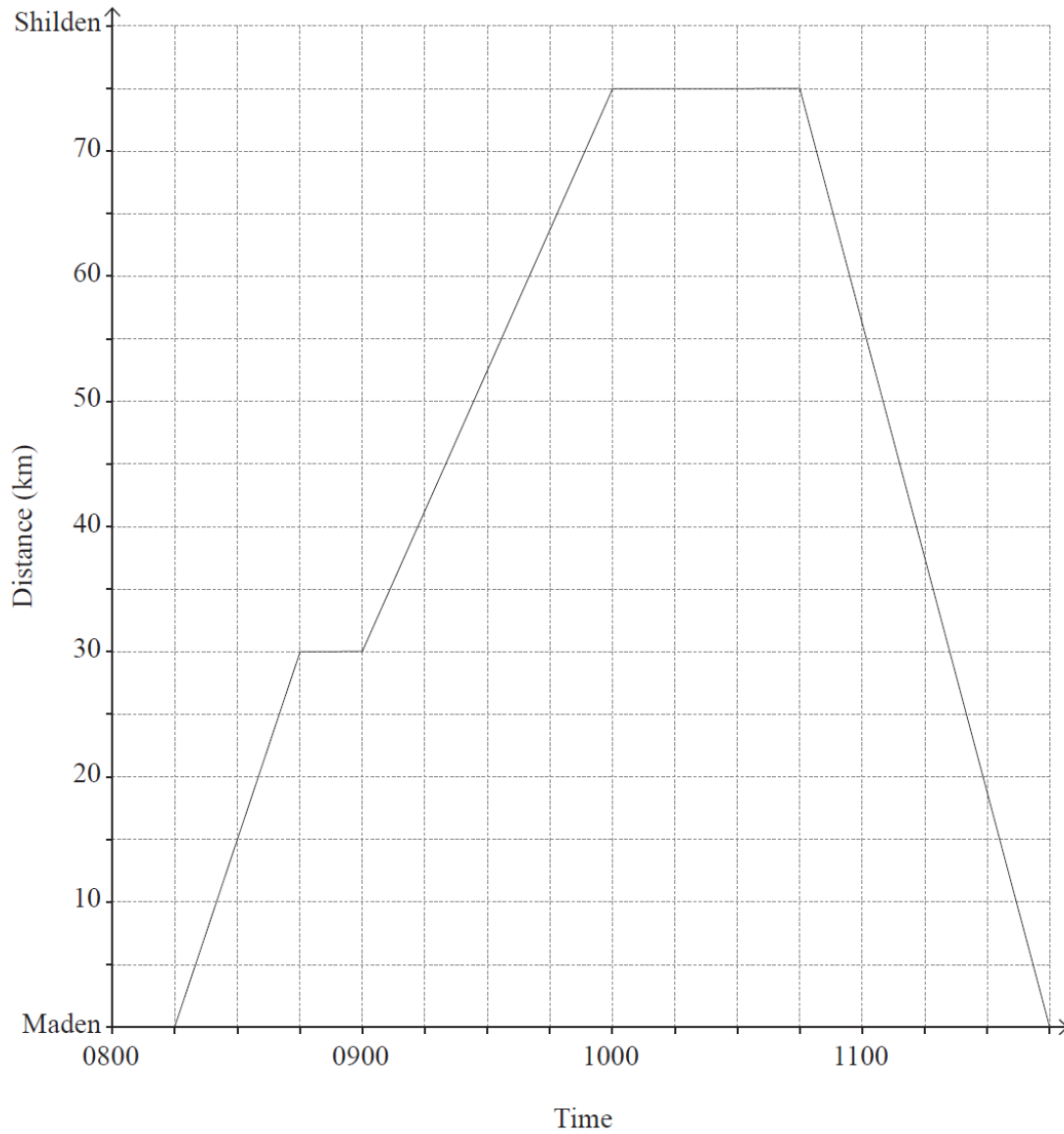
Answer _____ [1]

15 Use trial and improvement to solve the equation $x^3 - 3x = 11$

Give your answer correct to one decimal place.

You must show your working

x	$x^3 - 3x$	

7 The graph shows Ryan's journey from Maden to Shilden and back to Maden.

(a) During the total journey, for how long was Ryan not moving?

Answer _____ minutes [1]

(b) How far is Ryan from Maden at 0930?

Answer _____ km [1]

(c) Calculate the average speed for the whole journey.

State the units of your answer.

Answer _____ [3]