QUESTION 3

3.1 A group of students at a nursing college wrote two tests for the same course. TABLE 4 shows the test scores, as percentages, of the students.

TABLE 4: TEST RESULTS, AS PERCENTAGES, OF THE STUDENTS

TEST	STUDENTS																	
	Paul	Oscar	Helen	Elsie	Fiona	Ian	Linda	Beauty	Charl	Rose	Kevin	Danie	Neo	Joan	Goitse	Mangi	Zena	Anita
1	89	90	87	90	83	83	94	73	88	Y	97	95	95	86	73	73	84	63
2	50	52	57	61	61	63	65	65	66	67	67	68	70	71	75	78	79	79

[Adapted from www.sanc.gov.za]

A student who scores 85% or more for a test is awarded a distinction.

Use the information in TABLE 4 to answer the questions that follow.

3.1.1 Explain, giving a reason, whether the above data is discrete or continuous. (3)

3.1.2 Determine the median score for Test **2**. (3)

3.1.3 The mean score for Test **1** was **84%**. Calculate the value of **Y**. (4)

3.1.4 Identify the candidates whose test scores in both tests differed by 30%. (3)

3.1.5 Calculate the value of the interquartile range for Test 2. (4)

3.1.6 Express, in simplified fractional form, the probability of randomly selecting a candidate who did not get a distinction for Test 1. (3)

3.1.7 Determine the modal test score for Test 1. (2)

3.2 Mangiwe, one of the students at the nursing college, visited the Ambleside town centre and stayed at the Queens Hotel for one week.

The Ambleside town centre map is given in ANNEXURE C.

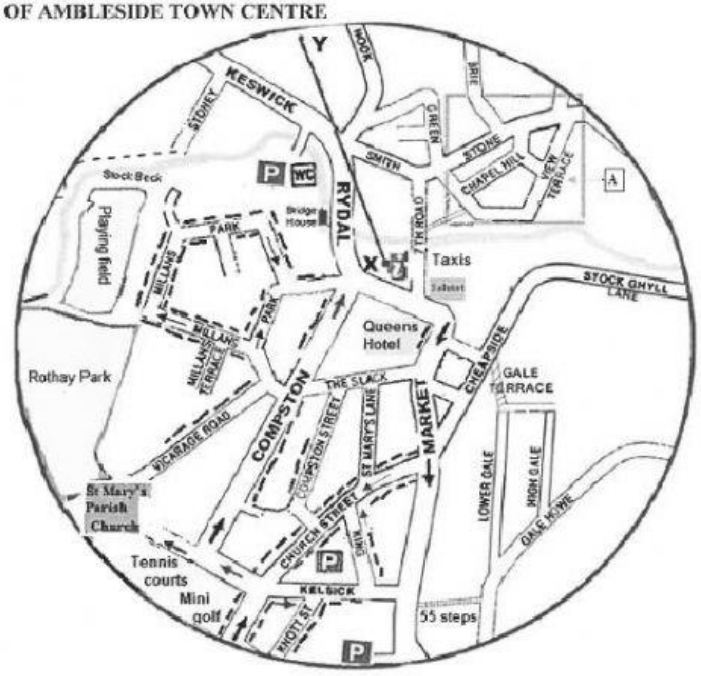
Use ANNEXURE C to answer the questions that follow.

ANNEXURE C

QUESTION 3.2

MAP OF AMBLESIDE TOWN CENTRE

KEY:	
i	Information
A	Parking in this area is not allowed
- - -	Maximum 1 hour free parking before 5 pm
P	Public car park



SCALE: 110 yards

[Adapted from amblesideonline.co.uk]

3.2.1 Identify the road in which parking is not allowed. (2)

3.2.2 Mangiwe travels from Keswick to Rydal Road.

Give ONE reason why she cannot turn right into Compston Road. (2)

3.2.3 Give the general direction of the Queens Hotel from the tennis courts. (2)

3.2.4 On the map, **X** is a point at the information centre and **Y** is a point at the University of Cumbria.

Use the scale on the map to calculate, in yards, the straight-line distance from **X** to **Y**. (4)

3.2.5 Mangiwe parked in Church Street from 12:00 to 15:25. A traffic officer who monitors the area issued her with a fine.

NOTE: A fine is the amount of money that someone has to pay if there is an offence.

(a) Write down for which offence the traffic officer issued her with a fine. (2)

(b) Mangiwe was fined £79,75 by the traffic officer.

Calculate, to the nearest £, the rate per hour for this fine. (5)
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