

**LEVEL 2 AWARD**  
**THINKING AND REASONING SKILLS**

**B901**

Unit 1 Thinking and Reasoning Skills

Candidates answer on the Question Paper

**OCR Supplied Materials:**

None

**Other Materials Required:**

None

**Friday 18 June 2010**  
**Morning**

**Duration: 1 hour**



Candidate Forename		Candidate Surname	
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Centre Number						Candidate Number				
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**INSTRUCTIONS TO CANDIDATES**

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your Candidate Number, Centre Number and question number(s).

**INFORMATION FOR CANDIDATES**

- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this paper is **60**.
- You will be assessed on the quality of your written communication in questions 6(c) and 7(c). The quality of your grammar, spelling and punctuation will affect the mark for these questions.
- This document consists of **16** pages. Any blank pages are indicated.

Section A

You are advised to spend no more than 30 minutes on this Section. It is worth 30 marks.

Answer all the questions in this Section.

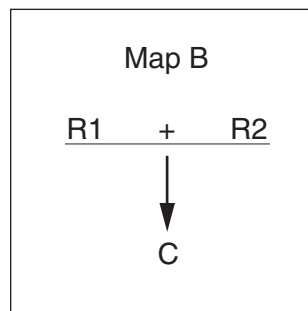
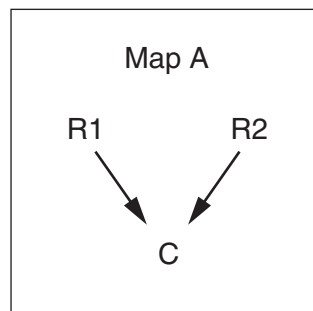
- 1 (a) Consider the argument in the box below:

*The door was left unlocked. You were the last one out. So you must have forgotten to lock it.*

Mark up the argument as follows:

- Underline the conclusion. [1]
- Circle the indicator word. [1]

- (b) When asked to provide an argument map for the above argument one student provided Map A and another student provided Map B.



- (i) Circle the correct map. [1]

- (ii) Explain why this is the right answer.

.....

..... [1]

2 A careers adviser is talking to a student and offers them the following advice:

“As a talented sports person, you have only two career choices which are: to become a professional footballer or a PE teacher.”

Identify and explain the flaw in the advice given by the careers adviser:

Name of flaw: ..... [1]

Explanation .....

.....

..... [1]

3 A teacher collects the following information about eight students in her class. This is presented in Table 1.

**Table 1**

Name	Personal details				
	Gender	Favourite Subject	Studied Thinking and Reasoning Skills in Year 11	Achieved Grade A in Maths GCSE one year early in Year 10	Has brothers and sisters
Andrew	Male	History	No	No	No
Belinda	Female	Physics	Yes	Yes	No
Carol	Female	Physics	Yes	Yes	No
David	Male	French	No	No	Yes
Eileen	Female	Biology	Yes	Yes	No
Fariba	Female	ICT	Yes	Yes	No
George	Male	French	No	No	Yes
Hamza	Male	Spanish	No	No	Yes

(a) Using the information in Table 1, you can see that there are some patterns associating different personal details together.

Identify any three patterns in the data:

First pattern

.....  
 ..... [1]

Second pattern

.....  
 ..... [1]

Third pattern

.....  
 ..... [1]

(b) The patterns in Table 1 are true of **all** of the students in the class.

On this basis, correctly complete the following table by:

- Circling either male or female in the column marked “Gender”.
- Circling either yes or no in the column marked “Has brothers and sisters”.

**Table 2**

Name	Gender	Favourite Subject	Studied Reasoning and Thinking Skills in Year 11	Achieved Grade A in Maths GCSE one year early in Year 10	Has brothers and sisters
Student I	Male / female	French	No	No	Yes / No
Student J	Male / female	Physics	Yes	Yes	Yes / No

[4]

(c) Look at Table 1 again. A new student whose favourite subject is German joins the class. The teacher predicts that this student will have brothers and sisters.

Identify one way in which the data in Table 1 might support this prediction and one way in which the data might not support this prediction.

Supports: .....  
 ..... [1]

Does not support: .....  
 ..... [1]

(d) The Head Teacher looks at Table 1 and makes the following claim:

“Studying Thinking and Reasoning Skills helps students to do well in Maths GCSE.”

Give **one** reason why the data in Table 1 does not support the Head Teacher’s claim

.....  
 ..... [1]

(e) The Head Teacher also claims that:

“In my school, girls do better in their GCSEs than boys.”

Give **two** reasons why the data in Table 1 does not provide strong evidence in support of this claim.

Reason 1 .....

.....

.....

Reason 2 .....

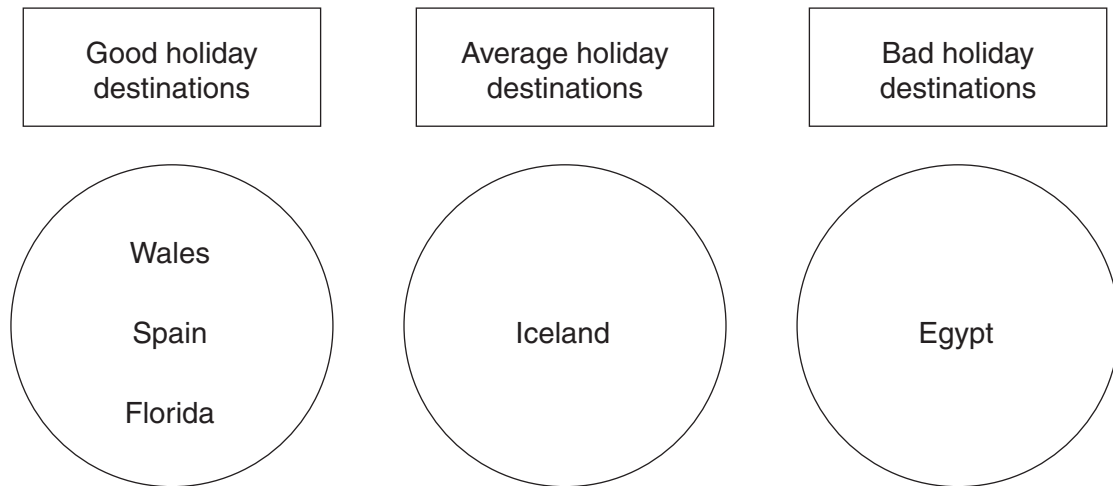
.....

..... [2]

4 Beth is going to book a holiday. To help her choose her destination she has collected the following information:

Destination	Climate	Cost	Distance from home	Child friendly	Night life
Iceland	Cold	High	Medium	Medium	Very good
Wales	Cold	Budget	Close	Very good	Poor
Spain	Hot	Medium	Medium	Very good	Good
Florida	Hot	High	Long haul	Very good	Medium
Egypt	Hot	High	Medium	Poor	Poor

She groups the holiday destinations as shown below:



(a) Identify the **one** factor which Beth thinks is both necessary and sufficient for a good holiday destination.

..... [1]

(b) Explain why the factor you identified in part (a) is both necessary and sufficient:

It is necessary because: .....

..... [1]

It is sufficient because: .....

..... [1]

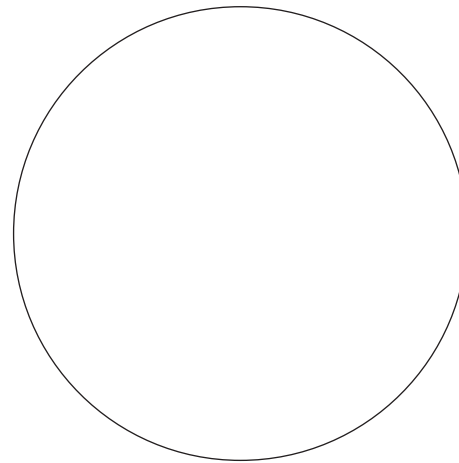
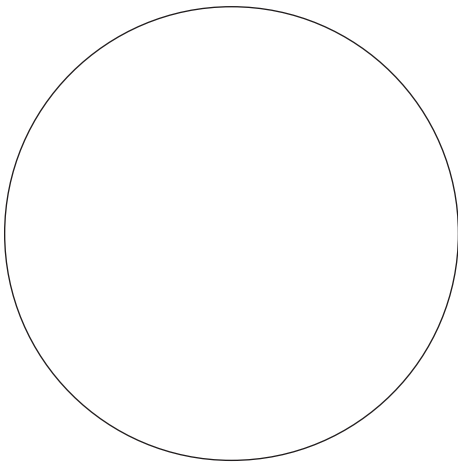
(c) Jeremy has very different ideas about what makes a good holiday. According to him:

- a hot climate is sufficient but not necessary for a good holiday.
- a very good night life is also sufficient but not necessary for a good holiday.

Please group the holiday destinations according to Jeremy's ideas by writing the destinations in the circles below:

Good holiday  
destinations

Bad holiday  
destinations



[5]



5 Two male students, Andrew and Callum, and two female students, Barbara and Danielle, all enjoy different hobbies.

Use the information provided below to identify which student enjoys which hobby.

- The boy who enjoys dancing goes to the same school as the girl who enjoys kick boxing.
- The girl who enjoys kick boxing socialises with Barbara.
- The person who enjoys playing in a band is a good friend of both Callum and the dancer.
- No two students share the same hobby.

Use the matrix to work out which student enjoys which hobby and then complete the sentences below.

	Dancing	Kick boxing	Playing in a band	Playing chess
Andrew				
Barbara				
Callum				
Danielle				

- (i) Andrew's hobby is ..... [1]
- (ii) Barbara's hobby is ..... [1]
- (iii) Callum's hobby is ..... [1]
- (iv) Danielle's hobby is ..... [1]

## Section B

You are advised to spend no more than 30 minutes on this Section. It is worth 30 marks.

Answer all the questions in this Section.

**Document A:** A photograph found on the internet, which claims to be of the Loch Ness Monster.

**Document B: The Witness Statements**

Witness Statement of David Bruce owner of the holiday company “Loch Ness Tours”:

*“I had been walking by the side of Loch Ness in the early evening. It was getting dark. I passed a couple of local fishermen. Shortly after that I heard a loud splash and a strange noise like a man with a bad cough. I turned to face the loch and then I saw it as clear as daylight. It was Nessie, for sure! It was a large dinosaur-like creature clearly visible above the surface of the water, making weird uncanny noises somewhere between a cough and a growl!”*

Witness Statement of Eileen Campbell best selling author of “True stories about Nessie”:

*“There have been over a hundred reported sightings of the Loch Ness monster since 1880. Further many of these sightings are very similar. Nessie is often described as being like a dinosaur or serpent. So the evidence for the existence of the monster is simply too strong to reject.”*

Witness Statement of the local fishermen:

*“David Bruce did walk past us. But soon afterwards we left. It was getting too dark for us. Also there was a tourist with a dog scaring off the fish. He kept throwing sticks in the loch for the dog to catch.”*

Witness Statement of the tourist:

*“I was out with my dog. It was getting late and I saw some fishermen getting ready to leave. My dog got very excited. I didn’t see anything but the dog must have done to bark like that. I think it must have seen or heard Nessie.”*

- 6 (a) Identify **two** questions you would like to ask about the photograph (Document A). Explain why answers to these questions could be useful to you in evaluating it as evidence for the existence of Nessie, the Loch Ness Monster:

Your first question:

..... [1]

Explanation:

.....  
.....  
..... [2]

Your second question:

..... [1]

Explanation:

.....  
.....  
..... [2]

- (b) Eileen Campbell in her witness statement claims “*the evidence for the existence of the monster is simply too strong to reject*”.

Identify and evaluate the two pieces of evidence which she uses to support this claim.

First piece of evidence:

.....  
..... [1]

Evaluation of the evidence:

.....  
.....  
..... [2]

Second piece of evidence:

.....  
..... [1]

Evaluation of the evidence:

.....  
.....  
..... [2]

(c) As part of a school assignment, you are asked to write a brief argument to convince the students in your class that David Bruce did **not** see the Loch Ness Monster.

Your argument should include:

- An alternative explanation for what David Bruce witnessed.
- A reasoned case to support your explanation, which uses the evidence in Document B to show:
  - how the evidence supports your explanation
  - why the views of David Bruce and others may not be convincing.

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[10]

**TURN OVER FOR QUESTION 7**

7

The Yeti is supposed to be a creature living in the remote, mountainous areas of the Earth. There have been claims of sightings over many years of these strange, human-like creatures walking upright.

Imagine that future explorers find a community of Yeti.

The explorers report back that the Yeti appear harmless. They live on nuts and berries, are very sociable and affectionate and live together in extended family groups. They do not seem to be frightened of humans. But despite showing some signs of intelligence they seem unable to communicate with us.

The explorers need to make a decision about how to treat these Yeti. They need to know whether to give them the same respect and rights as we give to human beings or whether some should be captured and put on show in zoos.

- (a) Identify one key question to which you would like to know the answer before making a decision about how these Yeti should be treated:

.....  
..... [1]

- (b) Explain why the answer to this question will be relevant to any decision over how to treat the Yeti:

.....  
.....  
.....  
..... [2]



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