

LEVEL 2 AWARD

THINKING AND REASONING SKILLS

B901

Unit 1 Thinking and Reasoning Skills

Candidates answer on the question paper.

OCR supplied materials:

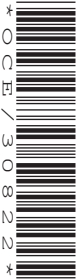
None

Other materials required:

None

Thursday 16 June 2011
Afternoon

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, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- 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).
- Answer **all** the questions.
- Do **not** write in the bar codes.

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 question 14. The quality of your grammar, spelling and punctuation will affect the mark for this question.
- 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 student asked four different teachers for help. Each teacher replied as follows:

Teacher W: The reason why your brother did so well in his exams was because he worked hard all last year.

Teacher X: The Thinking and Reasoning Skills exam is in June. Unit B901 has two parts. Both parts are worth 30 marks. It lasts one hour.

Teacher Y: You are hopeless. You are untidy and badly organised. You waste my time and your time.

Teacher Z: Hard work is necessary to do well in your exams. So you should stop messing about in class and start working harder.

Complete the following sentences by inserting the letter for the appropriate teacher in the space provided.

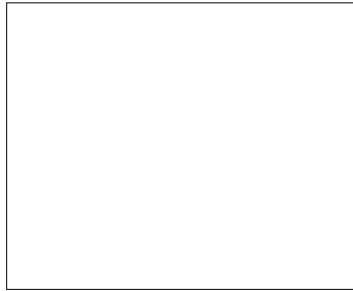
- (a) Teacher gives an argument. [1]
- (b) Teacher gives an explanation. [1]
- (c) Teacher gives a list of information. [1]
- (d) Teacher gives a rant. [1]

2 A hockey coach argues as follows:

“Hockey teams which do a lot of training score lots of goals. We do a lot of training. So we will score lots of goals. Therefore we will be successful in the league”

(a) Mark up the above argument by circling any indicator words, putting brackets around the intermediate conclusion and underlining the conclusion. [4]

(b) For the above argument, draw the correct argument map in the box provided.



[3]

3 Which of the following is a **necessary** condition for getting a high grade in an exam?

Circle the correct answer.

- Working hard
- Attending all lessons in that subject
- Going to a good school
- Sitting the exam
- None of the above on their own

[1]

4

4 Which of the following is a **sufficient** condition for getting a high grade in an exam?

- Working hard
- Attending all lessons in that subject
- Going to a good school
- Sitting the exam
- None of the above on their own

Circle the correct answer.

[1]

5 Anita gets the bus home from the centre of town every night. Her bus journey takes 25 minutes and it takes her another 5 minutes to walk from the bus stop to her house. The bus runs at half hour intervals.

(a) If she arrives at the bus stop at 5 p.m. and does not get home until 5.45 p.m. how long did she wait for a bus?

- 5 minutes
- 10 minutes
- 15 minutes
- 20 minutes

Circle the correct answer.

[1]

(b) If she had wanted to catch the earlier bus, at what time would she have needed to get to the bus stop?

- 4.40 p.m.
- 4.45 p.m.
- 4.50 p.m.
- 4.55 p.m.

Circle the correct answer.

[1]

(c) If she arrives at the bus stop at 5.20 p.m., how long will it take her to get home?

- 25 minutes
- 30 minutes
- 45 minutes
- 55 minutes

Circle the correct answer.

[1]

(d) If she arrives at the bus stop at 5.20 p.m. and all the buses that day are running 10 minutes late, how long will it take her to get home?

- 35 minutes
- 40 minutes
- 45 minutes
- 50 minutes

Circle the correct answer.

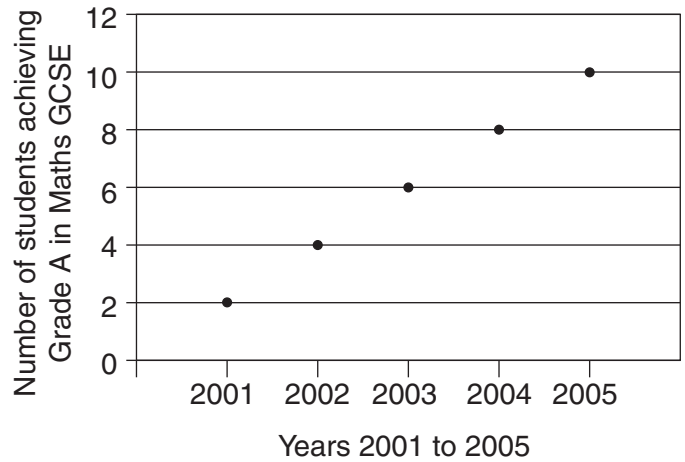
[1]

6 Consider the information in Documents A to C and answer the questions that follow:

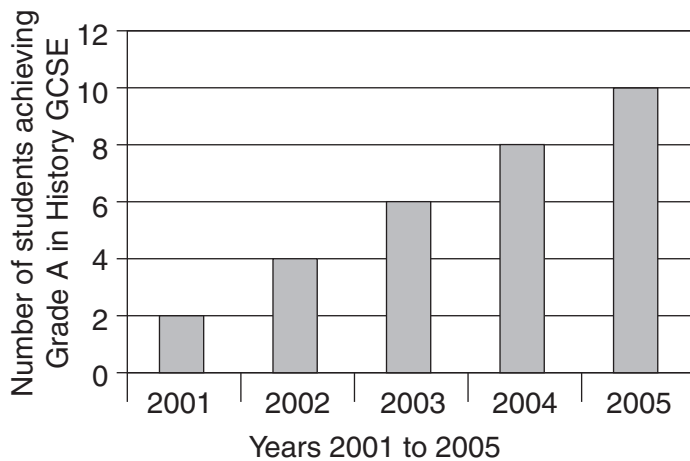
Document A

Year	Number of students achieving GCSE Grade A in Maths
2001	2
2002	4
2003	6
2004	8
2005	10

Document B



Document C



(a) Consider the information in Document A. If the trend continues into the future, will the number of students achieving A grades in GCSE Maths in 2006 be:

- The same as in 2005
- Less than in 2005
- 2 more than in 2005
- Impossible to predict
- Double that in 2005

Circle the correct answer.

[1]

(b) Consider the information in Document A. If the trend continues into the future and there are 20 students in the class each year, how many years after 2005 will it take before all the students get grade A in GCSE Maths?

- 4 years
- 5 years
- 6 years
- 10 years
- Impossible to say

Circle the correct answer.

[1]

(c) Looking at the information in Document A, someone concludes that the teacher of Maths GCSE is clearly getting better at teaching every year.

Identify **two** assumptions they are making in order to reach this conclusion.

(i) Assumption 1:
 [1]

(ii) Assumption 2:
 [1]

(d) Consider Documents A, B and C.

(i) Identify **two** similarities in the information presented which all three documents share.

Similarity 1:
 [1]

Similarity 2:
 [1]

(ii) Identify **one** difference in the information presented in two of the documents.

Difference:
 [1]

- (e) Suppose you are told that the trend in Document B applied to **all GCSE subjects** in one school between 2001 to 2005.

Which of the following hypotheses could best explain this trend?

- Many GCSE exams are getting easier.
- All students are improving.
- The school stopped entering students for GCSE who were predicted to fail.
- The number of pupils doing GCSE is increasing.

Circle the correct answer.

[1]

- (f) Suppose you are told that the trend in Document B applied to **all grades in all GCSE subjects** in one school between 2001 to 2005.

Which of the following hypotheses could best explain this trend?

- Many GCSE exams are getting easier.
- All students are improving.
- The school stopped entering students for GCSE who were predicted to fail.
- The number of pupils doing GCSE is increasing.

Circle the correct answer.

[1]

- 7 Four friends enjoy different kinds of holiday. Two of the friends, Adam and Carl, are male. Two of the friends, Bella and Davina, are female.

Use the information provided below to identify which friend enjoys which type of holiday.

- Adam and the girl who likes camping both received a post card from the friend on holiday in London.
- The person who went on holiday in London did not send a postcard to their friend Bella.
- Bella did receive a post card from the friend who went skiing.

Use the matrix to work out which friend enjoys which type of holiday and then complete the sentences below.

	Beach holidays	Skiing holidays	Camping holidays	City holidays
Adam				
Bella				
Carl				
Davina				

- (a) Adam enjoys holidays. [1]
- (b) Bella enjoys holidays. [1]
- (c) Carl enjoys holidays. [1]
- (d) Davina enjoys holidays. [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.

Read the following documents carefully:

Document A: The importance of going to university.

- In 2009 there were 50 000 more applicants to university than the number of places available.
- The pressure on university places is expected to increase in the future.
- People with degrees earn on average 25% more than people with just A levels.

This means we need to make sure the places go to the most deserving.

Document B: Time to change the admissions policy?

University places go to those with the highest grades. This could be unfair. After all, those with the highest grades may simply be those who go to the best private schools, and students from families who cannot afford to do this may lose out. For example, almost half the A levels taken in private schools are awarded grade A and hardly anyone fails, but in state schools only a quarter of A levels are grade A and more students fail. Maybe universities should change their policy and start awarding places to state school students with lower grades in preference to privately educated students with higher grades.

Document C: Comment from a university admissions officer.

We aim to select the best. In the past this simply meant those who achieved the highest A level grades. But now we want to select those with greatest potential. This means looking at the circumstances in which they achieved their grades, as much as the actual grades themselves. After all, if two people compete in running a mile and the first takes four minutes and the second takes five minutes you might jump to the conclusion that the first is the better runner of the two. But if you then learn that the first was running on a flat and smooth surface while the second was running up a steep hill with rocks then you would change your mind. Well, when a student is educated in a poor state school with large classes, poor facilities and surrounded by disruptive students, that is like running a mile up a rocky hillside!

Document D: Response from a student.

That's nonsense. For universities not to pick the best is unfair to those students who have worked hard and also insulting to state school students. It is like a girl going out on a date with someone not because she fancies him but because she feels sorry for him. The fact is, it is a tough world. The real reason why there are not more students from state schools going to university is they mess about in class and don't work hard enough. They shouldn't expect universities to lower their standards. That is not fair on the rest of us and is basically the same as cheating.

- 8 Document B says that one way of increasing the number of state school students gaining places at university is to select state school students with lower grades in preference to private school students with higher grades.

Suggest **two** other options which could be considered as ways of increasing the number of state school students getting places at university.

(a) Option 1: [1]

(b) Option 2: [1]

- 9 Document C contains an analogy comparing private and poor state schools.

Identify the analogy and complete the following sentences:

(a) Going to a private school is compared to

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

(b) Going to a poor state school is compared to

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..... [1]

- 10 Document D states that giving university places to students with lower grades is like “cheating”.

Identify **one** weakness and **one** strength of this analogy.

(a) Weakness:
..... [1]

(b) Strength:
..... [1]

11 Suppose you were told that the student quoted in Document D attended a private school.

Identify **one** credibility criterion and explain how this may weaken their credibility.

(a) Credibility criterion: [1]

(b) Explanation:
..... [1]

12 The argument in Document C suggests that the exam results of state school students do not reflect their true ability.

Consider carefully the following statements P to S:

P: Students at state schools who achieve B grades at A level usually do better at university than students at private schools who achieve A grades

Q: A few students at state schools do achieve A grades at A level

R: Some students at state schools don't even want to go to university

S: Even at university, private school students always do better in exams than students who were at state schools

Complete the following sentences by inserting the correct letter in the space provided.

(a) Statement most **strengthens** the argument in Document C. [1]

(b) Statement most **weakens** the argument in Document C. [1]

14 Write an argument setting out what needs to be done to improve schools so that more students can achieve high grades at GCSE and A level.

Your argument should include:

- a precise conclusion
- **at least two** reasons clearly supporting the argument
- relevant evidence and/or examples.

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[10]

15 Imagine that all the teachers at a private school swap places with all the teachers at a state school.

Possible outcomes include the following:

- Exam results at both schools stay the same as before
- Exam results at both schools improve
- Exam results at both schools go down
- Exam results now improve in the state school but go down in the private school
- Exam results now improve in the private school but go down in the state school

Circle **one** of the above outcomes, which you think is the most likely.

Explain why you think that might happen.

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[3]

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