UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education
Advanced Subsidiary Level and Advanced Level

THINKING SKILLS   **9694/01**

Paper 1 Multiple Choice   **June 2007**

2 hours

Additional Materials: Multiple Choice Answer Sheet
                          Soft clean eraser
                          Soft pencil (type B or HB is recommended)

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.

There are **45** questions on this paper. Answer **all** the questions.

For each question there are five possible answers **A**, **B**, **C**, **D** and **E**. Choose the one you consider correct and record your choice in pencil on the separate answer sheet.

Read very carefully the instructions on the answer sheet. Ignore responses numbered 46 – 50 on the answer sheet.

INFORMATION FOR CANDIDATES

Each correct answer will score one mark. A mark will not be deducted for a wrong answer.

This document consists of **26** printed pages and **2** blank pages.

UNIVERSITY of CAMBRIDGE
International Examinations

[Turn over

1 In Westland, during the 1950s, prices rose steadily at about 7% per annum. During higher wage demands caused prices to increase more and more rapidly throughout th The Government decided to make control of inflation its prime objective and gradually the which prices rose, year on year, began to fall. This continued throughout the 1970s until b end of the decade prices were only rising at about 5% per annum. The first half of the 1980s s price rises slow further, and by 1985 inflation had dropped to 3%. This was maintained until 1989 when a series of major bank failures caused high inflation over the following 3 years, as the currency fell sharply in value.

Which of the following graphs best represents the Westland inflation rate?

A

B

C

D

E
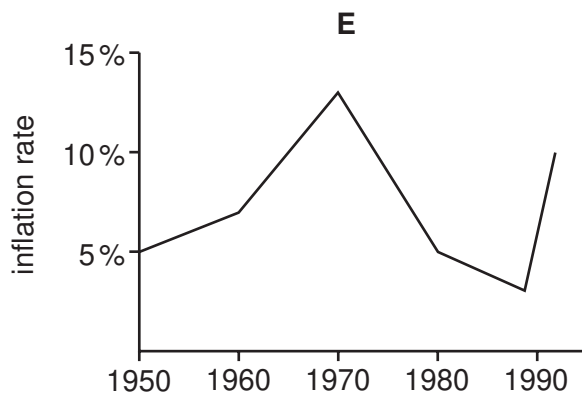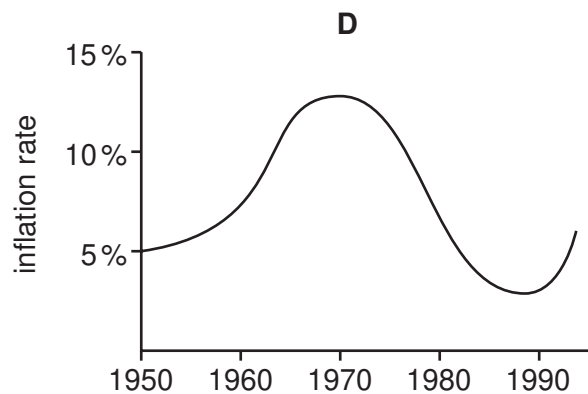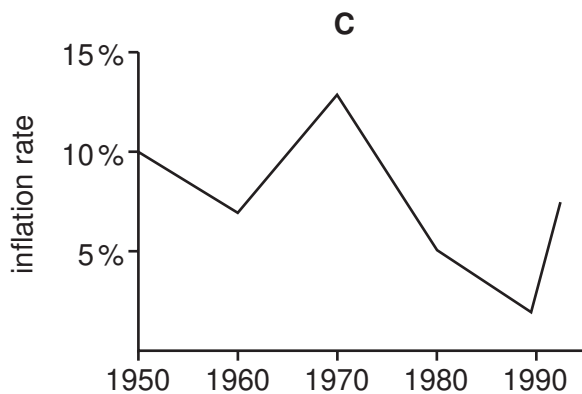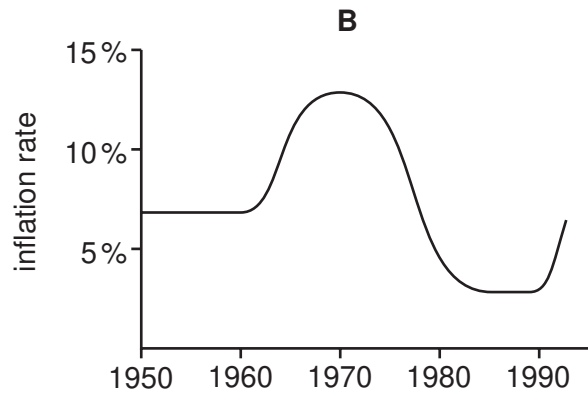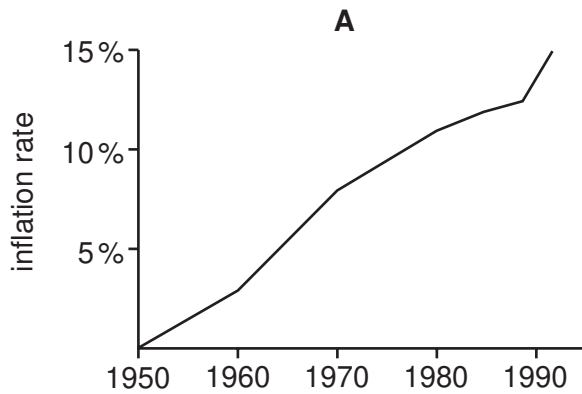
2 George's journey home from work involves travelling by underground railway to Euston
and then by overground train. It takes him 5 minutes to change platforms on arriving.
Overground trains leave Euston at 20-minute intervals and the train journey takes 8 minutes.
house is a five-minute walk from his local station. If he arrives at Euston at 4.15pm he gets home
at 4.50pm.

At what time will he get home if he arrives at Euston at 5.00pm?
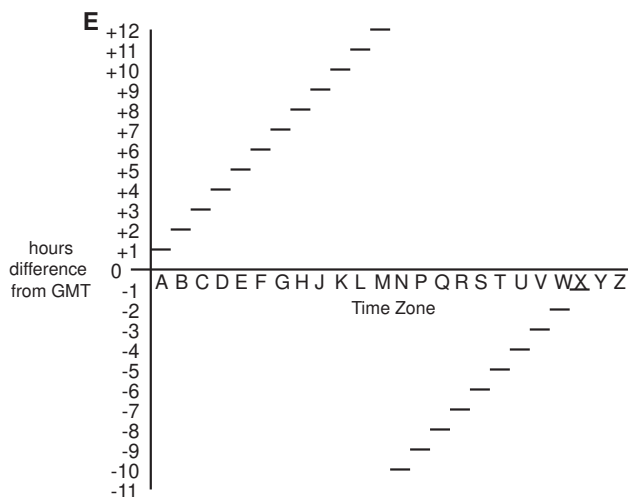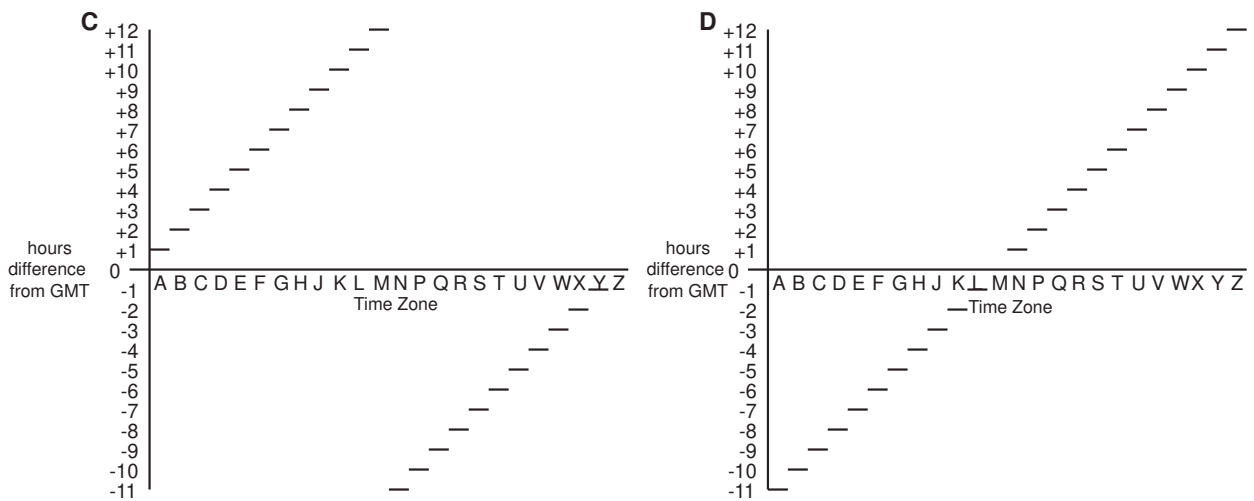
A   5.18pm

B   5.25pm

C   5.30pm

D   5.33pm

E   5.35pm

3 Ben hires a motor van to help his friend move house. He knows that the round trip is 350 km and
the van hire company tells him that the van does 100 km per $10.00 worth of diesel fuel (the
diesel costs 70 cents per litre). He asks them to put $36.00 worth of diesel into the van. However
the pump is faulty and actually puts in 51 litres of fuel for every 50 litres shown on the pump. On
the return journey he encounters a fallen tree across the road and has to make a detour. There
are no filling stations on the remainder of his journey, but he decides to get as near to his
destination as he can.

What is the **maximum** distance the detour could have added to his journey if he still manages to
make it back?

A   7.2 km

B   10 km

C   17.2 km

D   72 km

E   82 km

4 There are 24 time zones around the world each of which differs by a whole number of Greenwich Mean Time (GMT). These have been given letters from the alphabet, omitti as these are too easily confused with 1 and 0. GMT is 'Z', with the hours ahead of GMT B and so on. Once +12 hours is reached, the letters are then allocated starting at one behind and then continuing until Y which is for –11 hours.

Which of the following provide a look-up table with the letters in alphabetical order, omitting I and O?

A

hours difference from GMT

Time Zone: A B C D E F G H J K L M N P Q R S T U V W X Y Z

B

hours difference from GMT

Time Zone: A B C D E F G H J K L M N P Q R S T U V W X Y Z

C

hours difference from GMT

Time Zone: A B C D E F G H J K L M N P Q R S T U V W X Y Z

D

hours difference from GMT

Time Zone: A B C D E F G H J K L M N P Q R S T U V W X Y Z

E

hours difference from GMT

Time Zone: A B C D E F G H J K L M N P Q R S T U V W X Y Z
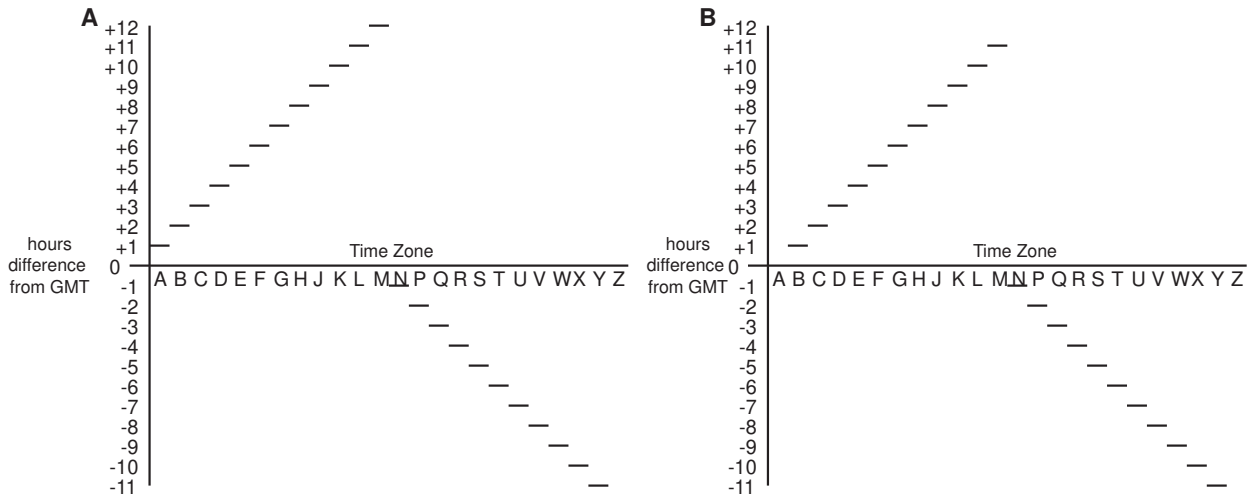
5 There is a two-way express train service operating between Kuala Lumpur Central Station (KLCS) and Kuala Lumpur International Airport (KLIA), 64 kms away.

Which of the following pieces of information is **not** required in order to calculate the minimum number of trains needed to operate the service each day?

A The first train leaves KLCS at 5.30am and the first train leaves KLIA at 6am.

B The journey between KLCS and KLIA (and vice versa) takes 28 minutes.

C On arrival at its destination each train stands for ten minutes before commencing its return journey.

D In peak hours (5.30am to 10.30am and 4.00pm to midnight, when the service terminates) trains run every 15 minutes.

E During off-peak hours (10.30am to 4.00pm) the trains run every 20 minutes.

6 Antioxidants in the foods we consume help to rid our bodies of destructive molecules that can cause cancer. Some foods, for example fruit and vegetables, contain high levels of antioxidants, so that the more of these foods someone eats, the higher is their intake of antioxidants. And the higher the intake of antioxidants, the lower the risk of getting cancer. A study has found that coffee is a rich source of antioxidants, and that Americans get more of their antioxidant intake from coffee than any other source. So, on average, Americans should have a relatively low risk of suffering from cancer.

Which of the following identifies the **flaw** in the above argument?

A Some cancers are believed to be caused by genetic factors.

B Antioxidants in coffee are as beneficial as those in fruit and vegetables.

C People who drink a lot of coffee may suffer from anxiety and irritability.

D The risk of cancer is affected by the level of intake of antioxidants, not by their source.

E Antioxidants in food can protect against cancer only if they are absorbed into the body.

7 Why are cats such good hunters? The answer lies in the taste buds. It is recognised that there are four basic tastes from which all flavours are composed: sour, bitter, sweet. Interestingly, while most mammals are able to taste all of these, cats are unable anything sweet. New research suggests that this is due to a genetic mutation which happ early in the evolution of the cat family, since all cats, both domestic and wild, share t characteristic. This mutation doubtless explains why cats evolved to be such good hunters, as, unlike other carnivores such as dogs who will eat fruits and berries if necessary, cats are limited to meat.

Which of the following is an **assumption** which underlies the above argument?

A An animal's behaviour is determined solely by its genetic make-up.

B Animals which enjoy fruits and berries will not be interested in hunting.

C If the mutation had occurred in dogs instead of cats they would now be the better hunters.

D Some fruits and berries do not taste sweet.

E The ability to taste sweet things was not lost as a result of cats' success as hunters.

8 A lot of time is spent worrying about the potentially hazardous effects of global climate change but, seen in a wider context, much of this concern is unnecessary. Even if the pessimists are correct, and the Earth is getting hotter due to human activity, is this really a reason to be pessimistic? Geologists tell us that the Earth undergoes a period of drastic temperature reduction or 'ice age' every 10,000 or so years. Surely then, a gradual increase of temperature across the globe between now and the next ice age can only be a good thing. Obviously some species in the meantime may die out but, in the long run, the overall chances of survival for the greatest number of species will be increased as a result of global warming.

Which of the following expresses the **main conclusion** of the above argument?

A A gradual increase in temperature over the coming centuries is in the interest of creatures living on Earth.

B A gradual increase in temperature over the coming centuries will increase some species' chances of survival.

C Concern about the dangers of global warming does not take into account its possible benefits.

D Much of the concern about global climate change is unnecessary when seen in a wider context.

E The pessimistic view that the Earth is getting hotter due to human activity is in fact justified.

9 There is growing agreement amongst scientists and doctors that being seriously o̶v̶... is dangerous for one's health. This is seen as a major problem in many Western countr̶... instances of obesity are on the rise, the result largely of the increasing availability of che̶... food and ready-made meals which are high in fat. But instead of going back to the basics̶... cooking things from simple, fresh ingredients as most doctors recommend, overweight peop̶... have been tempted by a succession of so-called 'miracle' diets, each guaranteeing significant weight loss in a relatively short period of time. However, while the diets may work in that they aid weight loss, the sudden changes to people's eating habits and the lack of basic nutrition they regularly entail, means that they often do more harm than good.

Which of the following is a **conclusion** which can be drawn from the above passage?

A   Any new miracle diet should be avoided despite the scientific evidence in its favour.

B   Overweight people cannot trust the claims made by promoters of miracle diets.

C   Overweight people should stick to natural, fresh ingredients as a means of controlling their weight.

D   People who lose a lot of weight very quickly usually put it back on once they come off the diet.

E   People who want to lose weight quickly should also consider the negative effects which can often accompany miracle diets.

10 Many people think that animal behaviour is predominately innate, in other words, that the way an animal behaves is 'hard-wired' into its genes. But an argument against this is the speed with which dramatic changes in characteristic behaviour have been seen in some animal populations. For example, in several European cities, one species of bird previously characterised by its daytime song has taken to singing in the middle of the night – the reason being that it is too noisy in the daytime to be heard! Such changes are too fast to be the result of evolution, and yet very quickly become normalised within a population as individual animals mimic new forms of behaviour.

Which of the following, if true, would **most strengthen** the above argument?

A   Animal behaviour, especially that of birds, varies according to the time of year.

B   Animals in cities are more prone to diseases which can affect their behaviour.

C   Birds in cities have been known to mimic non-animal noises such as police sirens.

D   Changes in the environment can trigger different genes to be expressed.

E   The change in the birds' behaviour has taken place within a single generation.

11 The rate at which an appliance uses energy is measured in watts. The unit of elect
electricity suppliers is the kilowatt hour, i.e. 1000 watts running for one hour. Electricit
per unit. People are being encouraged to use energy-saving light bulbs. However these a
more expensive than standard light bulbs as shown below:

	Energy-saving bulbs	Standard bulbs
Price	$4.99	2 for 49c
Life of bulb	6000 hours	1000 hours
Wattage	15 watts	60 watts

How much money will you **save** in the lifetime of an energy-saving bulb by buying an energy-saving bulb rather than standard ones?

A $8.51

B $9.00

C $9.98

D $11.45

E $13.50

12 A football league is comprised of 22 teams. Over the course of a season, each team plays each of the other teams twice (home and away). For every game that is played, 3 points are awarded to the winning side, 0 points to the losing side, and 1 point to each side if the match is drawn (equal score). (There are no other possible outcomes to a game.) Each team's total points from all their matches played are added together at the end of the season and the three clubs with the fewest points are relegated to a lower league. If two or more clubs finish with the same number of points, their positions are decided by goal difference, i.e. the difference between the total number of goals they have scored and the total number scored against them over the course of the season. A side with a higher goal difference finishes above one with a lower one.

What is the **lowest** number of points that a club can get in one season and not be relegated?

A 4

B 5

C 6

D 9

E 18

13 In Vengaland the unit of currency is the wong which is divided into 100 cents. The coinage is shown below together with the weights of the individual coins.

'Copper' coins (weight)	'Silver' coins (weight)	'Gold' coins (weight)
1 cent (1.5g)	5 cent (2g)	1 wong (10g)
2 cent (3.0g)	10 cent (4g)	2 wong (16g)
	20 cent (2g)	
	25 cent (10g)	
	50 cent (4g)	

Shopkeepers are required by banks to put coins with the same weight/value ratio into bags, which can then be weighed when the money is deposited. For example, all copper coins can be put into the same bag since a 2 cent coin's weight is twice that of a 1 cent coin.

What is the **smallest** number of bags that a shopkeeper requires so that all his coins can be weighed when taken to the bank?

A 3

B 4

C 5

D 6

E 9

14 While clearing out old documents, I came across various newspapers, but there was no complete set. Only those with particularly interesting items had been kept. In some cases series of articles published regularly at fixed intervals. The table below shows which papers kept in consecutive weeks, with the oldest in the top row.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		✓			✓	✓
	✓		✓	✓		
✓				✓		
	✓				✓	
		✓	✓	✓	✓	✓
✓			✓		✓	
	✓			✓		✓

What is the **longest** possible series of articles which had been kept?

A   4

B   5

C   7

D   8

E   9

15 A designer is commissioned to produce a carton which will hold at least 1 litre (1000 cm^3) of liquid. The carton must have a square base, be twice as tall as it is wide, and all dimensions must be a whole number of centimetres.

What is the **minimum** width of the square base?

A   10cm

B   70cm

C   7cm

D   8cm

E   9cm

16 In an argument there must be a conclusion, and one or more reasons to support the

From the above definition, which of the following is most obviously an **argument**?

A Pickled, fermented foods such as German Sauerkraut or Korean kimchi contain bacte which are thought to combat flu viruses.

B A snake with two heads has been taught to eat without fighting itself. Normally, two-headed snakes die because the heads fight over the food. This snake's heads have learned to take it in turns.

C Loud noise can make hair cells in the ear divide and form tumours. These tumours can damage hearing. It is important for young people to think about the noise from their stereos.

D One species of ant has teacher ants, which teach a pupil routes from the nest to food sources. The teacher does not move while the pupil stops to learn the route. The pupil taps the teacher when it is ready to move.

E The Augrabies flat lizard chooses its fighting opponents by their scales not their size. The South African lizards flash their reflective throats at each other. Studies show that the lizard with the most reflective scales is likely to win.

17 Children in the UK tend to draw pictures of scientists as mad. This is unsurprising, as British and American films tend to portray scientists as mad.

Which of the following is an **assumption** underlying the above argument?

A British and American scientists tend to be mad.

B Children in other parts of the world do not tend to draw scientists as mad.

C Children in other parts of the world are more likely to want to be scientists.

D Children in Britain and America learn about scientists from film images.

E British and American scientists often originate in other parts of the world.

18 In archaeology researchers working in the field must make particular efforts [to] [a]nd cooperate with colleagues from many nations, cultures and academic backgrounds. E[xcavations] are almost always_____, employing people from several different disciplines[; and] they involve archaeologists from rich nations investigating the ancient cultures of poor [ones.] Conflicts may include accusations of looting, exploitation of local cultures and rows between ri[val] academics.

Which of the following phrases, inserted in the blank space, **most logically completes** the passage?

A   multinational

B   very dirty

C   small and local

D   extremely friendly

E   culturally unsuitable

19 Evidence shows that the percentage of birds that die from flying into electricity cables has increased from 1% to 6% over the past decade.

Which of the following statements, if true, could **explain** this?

A   The number of birds has increased over the past decade.

B   Birds cannot die from sitting on electricity cables.

C   Electricity cables ought not to be built near bird breeding grounds.

D   The percentage of birds that die from being shot has decreased by 5%.

E   The proportion of birds whose cause of death was unknown has decreased hugely during the last 8 years, due to heightened priority being given to the national surveys by central Government.

20 Global warming is caused by carbon emissions from the use of fossil fuels, p...
Because there is a fear that it will be impossible to reverse the adverse effects of globa...
some developed countries are trying to reduce their carbon emissions. This is pointless b...
any reduction achieved would be offset by rising emissions from countries whose economie...
developing rapidly. But where Governments fail, the market will succeed. No new large oilfie...
have been discovered in the last thirty years, so soon global oil production will decline. This wil...
cause a rise in the price of oil, thereby reducing oil use. So, without political action, the problem of
global warming will be solved.

Which of the following **best expresses the meaning** of 'the solution of the problem of global
warming' upon which the above argument depends?

A   Reduction at some future date of carbon emissions from the use of oil.

B   Reversal of the trend towards increasing average global temperatures.

C   The slowing down of the rapid growth rate of developing countries.

D   Government funding to develop less-polluting sources of energy.

E   Immediate international agreement to reduce the use of fossil fuels.

21 A high street shop makes the following charges for developing photographs:

Development time	24-exposure film $	36-exposure film $
1 hour	4.99	5.99
1 day	3.99	4.99
3 days	2.99	3.99
6 days	1.99	2.99

Films cost $3.95 for 24-exposures and $1.00 more for 36-exposures.

Ann is going on holiday and wants to buy two 36-exposure films. However the shop has run out
of 36-exposure films. So she has to buy three 24-exposure films instead.

How much extra will Ann have to pay for her photographs, assuming she would have finished
both 36-exposure films?

A   At least $1.94

B   At least $1.96

C   At least $2.00

D   At least $2.95

E   At least $4.00

22 A man is given two ways of investing $100. The first option will increase the invest~~~~ ~~~~ every year (after one year $120, after two years $140, after three years $160 etc…). T~~~~ option will increase the investment by $30 the first year, and then by $29 and so on, by ~~~~ each year (after one year $130, after two years $159, after three years $177 etc.).

For how long would the man have to invest his money in order for the first scheme to be **more** profitable than the second?

A 15 years

B 20 years

C 22 years

D 25 years

E 30 years

23 Records of births, deaths, and marriages in 18th century England are incomplete, and there is plenty of confusion as there were not many names in common use. These are the fragments of my family tree that I've found so far, with '═══' indicating 'married':
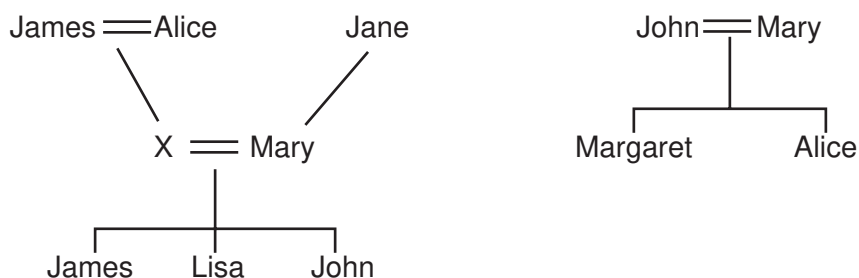
These appear to be correct, but we cannot be sure that any of these are complete; for example, Margaret and Alice could have had other brothers and sisters who were not born or were no longer alive at the time the record I saw was written. Any of the people could have been married more than once. Unfortunately, the name of X is unreadable. The unimaginative re-use of names does at least allow us to be sure which are male and which female.

Which one of the following, if correct, would be enough to establish the exact relationship between Margaret and Lisa?

A The two Johns are not the same person.

B Margaret's sister Alice had a son called James.

C The two Marys are the same person.

D Lisa's brother James had a wife called Alice.

E The two Alices are the same person.

24 Harry visits his mother every Sunday. He catches a train from Newtown Station ... Station which is a 10-minute bus ride from his mother's house. There are two trains an... is a stopping train taking 35 minutes and the other is a direct train taking 20 minutes. Bo... and trains run half-hourly. He finds that whichever train he catches, his journey time catching the train to arriving at his mother's (including any wait for the bus) is always 55 minutes.

Assuming the trains and buses run on time, which of the following would account for the above?

A Both trains and buses leave on the hour and half past the hour.

B Buses leave Oldtown 15 minutes after trains leave Newtown.

C The direct train arrives at Oldtown 20 minutes before a bus leaves and the slow train 5 minutes before a bus leaves.

D If he catches the fast train, he just misses a bus at Oldtown.

E Trains leave Newtown 20 minutes before buses leave Oldtown.

25 A three-dimensional shape is made by taking a cube and cutting off each of its corners. Assume that the cube is large and that the cuts are relatively small (extending to less than halfway along each edge).

How many edges does the new shape have?

A 12

B 18

C 20

D 32

E 36

26 According to modern physics, it is not possible for anything in the universe to trave̶l ̶f̶a̶s̶t̶e̶r̶ ̶t̶h̶a̶n̶ the speed of light. A consequence of this is that certain parts of the universe will alway̶s̶ ̶b̶e̶ ̶a̶ mystery to us, as to travel there even at the speed of light would take thousands or even ̶m̶i̶l̶l̶i̶o̶n̶s̶ of years. At least this is what the scientists say. But there is an obvious objection to ̶t̶h̶i̶s̶ argument. As science and technology advances, our understanding of the universe change̶s̶ ̶t̶o̶o̶.̶ People in the eighteenth-century would never have thought it was possible to talk to someone on the other side of the world. Things which are not possible now may become so as our technology and understanding of the world changes.

Which of the following is a **conclusion** which can be drawn from the above passage?

A All scientific knowledge is merely theoretical and open to amendment.

B It is only a matter of time before travel to remote parts of the universe will be possible.

C The possibility of journeying to distant parts of the universe at some time in the future should not be ruled out.

D The universe is so vast that a satisfactory understanding of all of its parts will always elude us.

E Nothing is impossible however remote it may seem at the time in which we live.

27 There has been much concern over the growth of the computer games industry, in particular the effects on children and young teenagers who regularly play games with extremely violent content. And yet the degree of concern is unwarranted. It is a simple fact of life that young people, particularly boys, are attracted to games and activities with violent themes; this does not mean that the activity itself will encourage violence. It is seldom argued, after all, that the reading of action comics encourages violent behaviour: they are merely forms of harmless escapism. People ought to see the so-called dangers of playing computer games in the same light as the reading of action comics with violent content.

Which of the following, if true, would **weaken** the above argument?

A People tend to be less attracted to activities which have violent themes as they get older.

B Recent evidence suggests that if a natural tendency is encouraged at an early age it becomes stronger.

C Research indicates that the strongest cultural influence on young people comes from film and television.

D Some people have extremely high natural levels of aggression.

E There are genres of modern action comics that have extremely violent content.

28 Genetic discrimination is likely to become a real problem as more people undergo g
Children may taunt each other in the playground on the basis of genetic differences,
continue such behaviour in the workplace. People are likely to be denied approp
insurance, health care insurance and possibly even employment if they have a gene
predisposes them to particular illnesses. For example, an American woman with a gene wh
makes her more likely to develop breast cancer, has been denied cover for all forms of cancer.

After hearing the above argument, a student summarised the conclusion as follows:

'We need new laws to deal with genetic discrimination.'

Has the student:

A expressed the conclusion fairly and accurately?

B expressed the conclusion too strongly?

C not expressed the conclusion strongly enough?

D drawn a further conclusion?

E identified the wrong part of the argument as the conclusion?

29 Increased wages is not the answer to the recent crisis in police recruitment. It is people with a
healthy disdain for our money-grabbing culture that we should be trying to attract. It is no use
stimulating the interest of new applicants if they are insufficiently principled to fulfil the
expectations of the job, and resist the trappings of power. And yet it is just that kind of applicant
that a purely financial recruitment drive will attract. A more subtle attempt to win the attention of
potential police officers is needed.

Which of the following identifies the **main flaw** in the argument?

A Training can change people's principles.

B There is no crisis in police recruitment.

C Principled people may be attracted by better pay too.

D Expecting people to work for no money is unrealistic.

E A similar system of financial incentives has been shown to work for teacher recruitment.

30 In an interview, the American chat-show host Jerry Springer said that Britis~~~~~~ programmes were 10 years behind American television programmes. If he is right~~~~ British fan of television should consider watching American T.V. programmes rather tha~~ ones.

Which of the following is an **assumption** underlying the above argument?

A   American television is the most advanced in the world.

B   American television is necessarily better because it is 10 years ahead in time.

C   American television is watched more widely than British programmes.

D   American television programmes are more expensive to produce than British ones.

E   Jerry Springer is a good judge of quality in television broadcasting.

31 A certain gas is formed by adding quantities of ore to water. It is then transported by tanker to a refinement plant before being sold. The following graphs show: X – how much gas is formed by adding different quantities of ore to water; Y – how much gas is normally lost in the transportation of the gas to the refinement plant, given how much the tanker sets off with.

Graph X

Graph Y
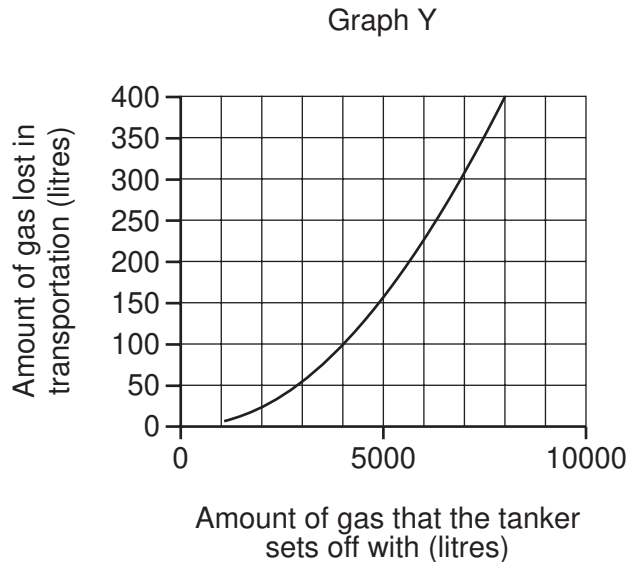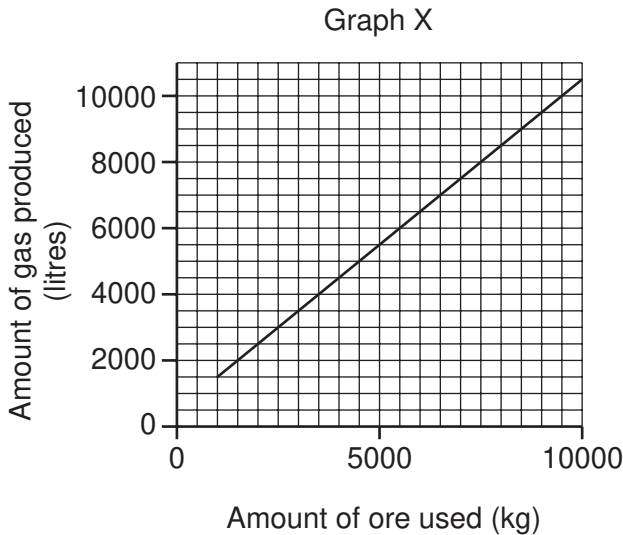
If the tanker arrived at the refinement plant with 6000 litres of gas, which of the following is **closest** to the amount of ore used to produce it?

A   5250 kg

B   5500 kg

C   5750 kg

D   6500 kg

E   6750 kg

32 Groups of organic chemicals have a general mathematical formula which applies to ~~~~ of the group. So, suppose that molecules such as C_nH_n exist. If n was equal to one ~~~~ molecule would have one carbon atom and one hydrogen atom, that is C_1H_1. The next me~~~~ the group would have two of each type of atom, C_2H_2, the third would have three of each ~~~~ C_3H_3, and so on as the organic molecule increases in length.

The first four members of a group of organic chemicals known as the *alkanes* are as follows:

Molecular formula	Name
CH_4	methane
C_2H_6	ethane
C_3H_8	propane
C_4H_{10}	butane

Which of the following represents the general formula of the *alkanes*?.

A C_nH_{2n-1}

B C_nH_{2n}

C C_nH_{2n+1}

D C_nH_{2n+2}

E C_nH_{2n+3}

33 A group of 5 men are able to load a pile of 90 logs onto a truck in 15 minutes.

How long would it take 3 men to load 120 logs, if they load them at the same rate (answer to the nearest minute)?

A 12 minutes

B 18 minutes

C 33 minutes

D 35 minutes

E 42 minutes

34 A cyclist travels along a road at a constant speed. After a short time he reache̶ the̶
ascends it slowly; stops at the top for a few minutes, and then turns around and cycles̶
down the hill.

Which of these graphs could represent this journey?
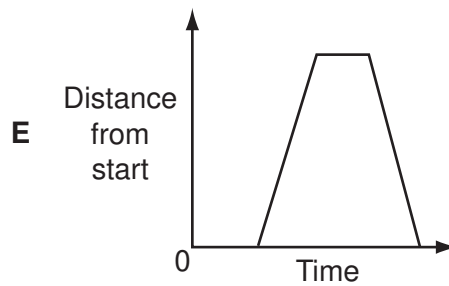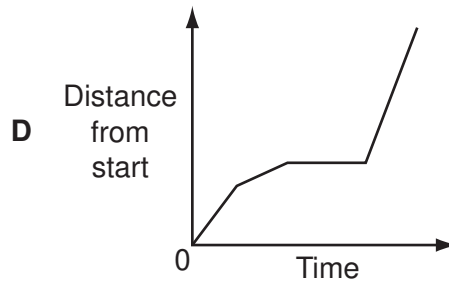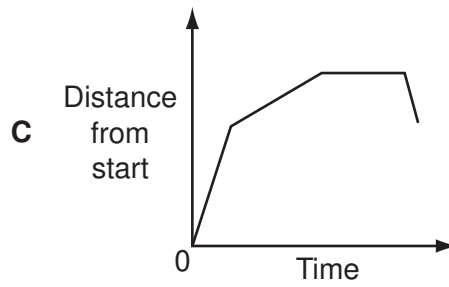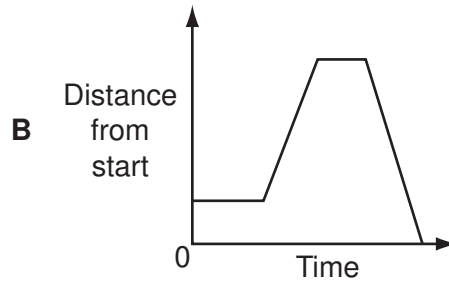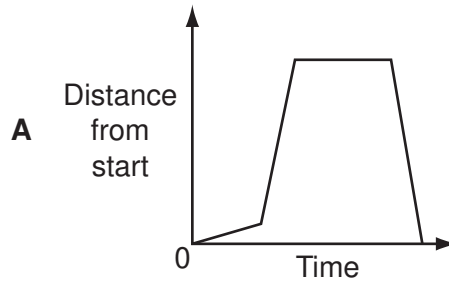
35 Bess and Charlie start picking peas at 8 am and finish at 8 pm and take the same ~~~~
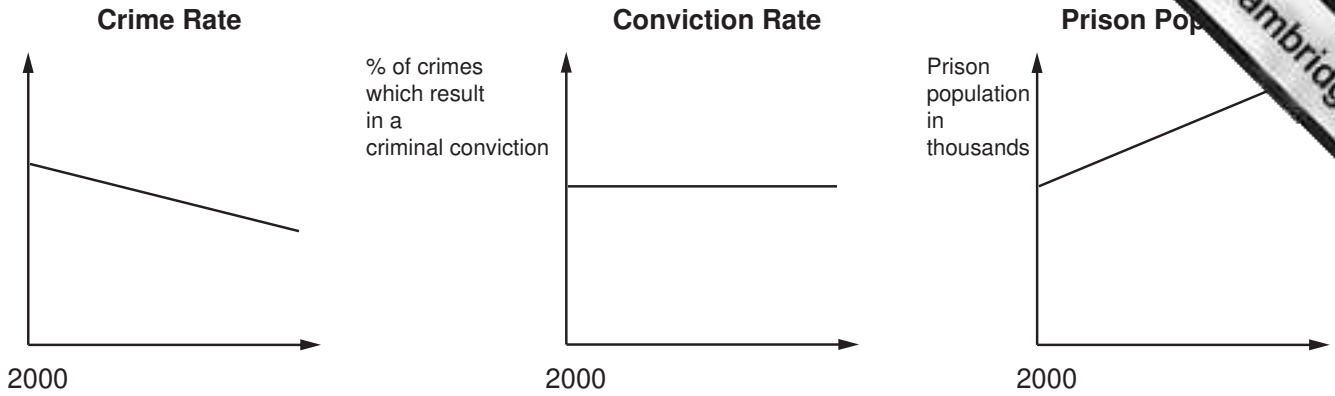Bess picks peas at the rate of 25 kg per hour while Charlie only achieves 20 kg per hou~

Which one of the following would be **sufficient** to determine the length of their lunch break?

A   The difference in total weight of peas picked before and after lunch.

B   The difference in weight of the peas picked in the whole day by Bess and in the whole day by Charlie.

C   The starting time of the lunch break and the weight of peas picked by Bess before lunch.

D   The sum of the weights of peas picked by Bess before lunch and by Charlie after lunch.

E   The total weight of peas picked before the lunch break.

36 Many people have become aware of the need to cut down on the amount of waste that they are producing in order to lessen the impact on the environment. As a result, many parents have decided to cease using disposable nappies (diapers) for their babies and have gone back to using washable, re-useable nappies instead. However they are misguided. The amount of energy used in washing nappies has as much negative environmental impact as the disposing of nappies. Therefore, parents might as well make their life a bit more pleasant by using disposable nappies.

Which of the following, if true, would **most weaken** the above argument?

A   Disposable nappies cost much more than re-useable nappies.

B   Re-useable nappies require very high standards of hygiene if they are used.

C   Disposal of rubbish in landfill dumps is a health hazard for those who live near them.

D   Disposable nappies are often manufactured by exploited child labour.

E   Re-useable nappies are much more difficult to use than disposable nappies.

37

Crime Rate	Conviction Rate	Prison Pop

% of crimes which result in a criminal conviction

Prison population in thousands

2000   2000   2000

Which of the statements below is a **conclusion** which follows from the above data?

A Prison populations should be falling given the improvement in crime detection.

B The number and/or length of prison sentences have increased while the number of convictions has fallen.

C The percentage of crimes solved by the police does not affect the crime rate.

D There has been an increase in the length of prison sentences given to convicted criminals and this has reduced the crime rate.

E There has been an increase in the number of convicted criminals sent to prison and this has reduced the crime rate.

38 Amongst the bird population, 'bird flu' is spreading around the world. Humans can catch this disease from contact with birds, but as yet there is no evidence that they can catch it from each other. Nevertheless, some people have predicted a worldwide epidemic amongst the human population. If this does happen, the global economy will be severely damaged. There will be a huge death toll, and a consequent reduction in the workforce, causing problems for manufacturers. Also, people will be reluctant to travel, so the tourist industry will suffer, and few will want to risk infection by going to the shops to make any non-urgent purchases. Some economists say that in such circumstances, it is even possible that a global economic recession could occur.

Which of the following expresses the **main conclusion** of the above argument?

A Bird flu is likely to cause a global economic recession.

B Humans can catch bird flu only if they have contact with birds.

C It is possible that there will be an epidemic of bird flu amongst humans.

D The manufacturing and tourist industries will suffer as a result of bird flu.

E An epidemic of bird flu amongst humans would damage the global economy.

39 Speculation by newspapers about exams becoming easier is unfair on students. The ~~actual~~ exams and the difficult choices about what to do after leaving school are hard enoug~~h without~~ further worries about the validity of the qualifications themselves. Speculation ab~~out~~ standards of the exams ought to be left to the Government authorities, and not discussed ~~in the~~ public domain unless a solution is on offer. As yet there is none and therefore the speculation ~~is~~ not constructive.

Which of the following **best explains** why the speculation is declared "unfair", in the first sentence?

A It is unfair because the exams are too hard.

B It is unfair because the universities/employers will ask for higher grades.

C It is unfair because there is nothing the students can do about it.

D It is unfair because the newspapers do not know whether it is true or not.

E It is unfair because students should be encouraged to work as hard as possible for the exams and this requires confidence in them.

40 The following table shows the birth rate (per 1000), death rate (per 1000) and population of a certain country. The birth rate is the number of babies born per 1000 of the population in a year. The death rate is the number of people who die per 1000 of the population in a year.

Year	2003	2004	2005	2006
Birth Rate	12.9	12.8	12.7	12.8
Death Rate	12.7	12.9	13.0	12.8
Population (million)	24	24.5	24.6	25.5

Which of the following could **explain** the trends reflected in the table?

A A decrease in life expectancy during this period.

B An increase in life expectancy during this period.

C An increased use of contraception during this period.

D An increase in the number of refugees entering the country during this period.

E A decrease in the number of refugees entering the country during this period.

41 Among the films showing at Kevin's nearest multiplex cinema there are two that Kev___ ___e to see. The start times and running times are in the table below.

Title	Running Time (minutes)	Start times			
Tim Burton's Corpse Bride	76	11.45	13.30	15.15	17.00
		18.45	21.00		
Wallace and Gromit in the	85	12.30	13.30	14.15	15.00
Curse of the Were-Rabbit		16.00	16.45	17.30	18.30
		19.15	20.00	21.45	

Kevin's plan is to see these films tomorrow. He doesn't mind what order he sees them in but wants to arrive at the cinema as late in the day as possible. Buses from his house arrive at the cinema at 10 minutes and 40 minutes past each hour. The last bus for the day returning from the cinema to Kevin's house leaves at 23.00.

What is the arrival time at the cinema of the **latest** bus that Kevin can take to fulfil his plan?

A   17.10

B   18.10

C   18.40

D   19.10

E   19.40

42 Ben, a magician, has to paint a large cube for his magic act. Paint of all colours can be bought in different size cans. The price of these cans is in the table below.

Can size (litres)	1	2	3	4
Price ($)	10	16	20	22

Each face of the cube requires exactly one litre of paint. For the purpose of the magic act, it is essential that no more than one pair of opposite faces and no more than one pair of adjacent faces are the same colour.

What is the **least** amount Ben can spend on paint to complete the job?

A $38

B $40

C $48

D $52

E $56

43 Wesley and Eamonn live 5 kilometres from each other, both on the main road that ~~through~~ Longtown. They both left home at 11.05 this morning in order to meet each other at ~~the~~ Library, 2 kilometres from Wesley's home. They both walked at the same pace throughout, ~~at~~ the same pace as each other. Wesley spent 4 minutes in a shop on the way, but still arriv~~ed at~~ the Library 7 minutes before Eamonn.

At what time did Wesley and Eamonn meet?

A 11.26

B 11.31

C 11.33

D 11.38

E 11.45

44 Daphne has been doing jobs for her parents at weekends and they have been paying her for what she does. She chose which jobs to undertake from the list below.

Job	Time taken to complete job	Payment
Washing car	1 hour 30 minutes	$6
Scrubbing kitchen floor	2 hours	$8
Supermarket shopping	3 hours	$12
Laundry	5 hours	$21
Vacuum cleaning and tidying	7 hours	$30

Daphne has been choosing which jobs to do purely on the basis of earning the most money possible. She must choose complete jobs – she cannot do part of one. In the interest of her education her parents will not allow her to work for more than eight hours any weekend.

This weekend another job is added to the list above – making breakfast for parents, taking one hour with a $4 payment.

How much **more** will Daphne earn this weekend compared to last weekend?

A $0

B $1

C $2

D $3

E $4

45 Photographs of pupils are taken and offered for sale in various packages:

2 large and 3 small: $8
3 large and 2 small: $9
4 large and 2 small: $11

These prices include the same amount for post and packaging.

What is the cost of postage and packing included in these prices?

A $0

B $1

C $2

D $3

E $4

BLANK PAGE

BLANK PAGE