

Question 1 (33)

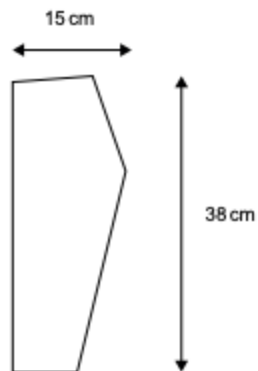
A band of rebellious traders in Wales has decided to take their whole town 'offshore' in protest at the insignificant amounts of UK tax paid by big businesses. An alliance of shopkeepers from the town want to use the same controversial loopholes favoured by huge multinationals such as Google so that they too can legally avoid UK tax. The coffee giant Starbucks, for example, has been branded immoral for transferring revenues out of the UK and into the Netherlands and Switzerland, where they receive sweetened tax deals. But the shopkeepers of the town cannot have it both ways. If they believe it is immoral for Starbucks to avoid UK tax, it is immoral for them, too. They should continue to pay UK tax in full.

Which one of the following, if true, most weakens the above argument?

- A The sole purpose of the protest is to pressure the government into tackling tax avoidance by big business.
- B If the shopkeepers are successful, every town could follow their lead, harming the UK economy even further.
- C Small businesses acting alone cannot obtain the same tax breaks as the giant corporations.
- D Every time the government comes up with a way of tackling tax avoidance, lawyers simply find a new loophole.
- E One of the town traders found that last year he paid seven times more corporation tax than Facebook.

Question 2 (36)

- 36 Nathan is making a pair of trousers for his young son. The diagram shows the pattern for one piece. Four such pieces are needed.



[diagram not to scale]

For simplicity he assumes that he will need a 15 cm \times 38 cm rectangle for each piece. The material comes in three widths with prices as shown:

<i>width</i>	<i>price/metre</i>
100 cm	£2.00
120 cm	£2.20
160 cm	£2.80

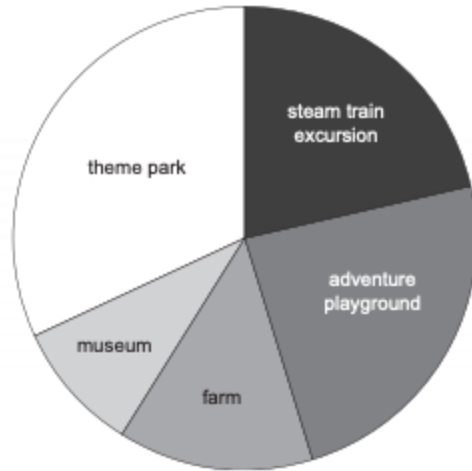
Material may be bought in lengths which are exact multiples of 10 cm.

What is the lowest price he can pay?

- A 42p
- B 56p
- C 60p
- D 66p
- E 80p

Question 3 (38)

38 The Head of Year 6 is planning an end-of-term treat for her students. The pie chart represents the numbers of votes cast by the children for each of the five possible outings.



Which one of the following rows (A–E) could show the actual number of votes cast by the children for each of the options?

	<i>steam train excursion</i>	<i>adventure playground</i>	<i>farm</i>	<i>museum</i>	<i>theme park</i>	<i>total</i>
A	35	45	30	15	55	180
B	24	28	20	16	32	120
C	45	55	20	15	65	200
D	22	28	15	15	40	120
E	32	36	20	14	48	150

Question 4 (40)

Long hours and poor pay have become commonly accepted, but they are taking a heavy toll on life at home. It is not a pretty picture: an economy where high levels of stress and anxiety are normal, where people get ill because they have lost control of their time, and where marriages are damaged and children suffer. Yet it is a situation that politicians invite us to applaud. They praise ‘strivers’ and ‘hard-working people’, not chilled-out, caring mums and dads. The longer and harder we work, the more admirable we are supposed to be. So the political slogans have clearly been effective, but the resulting glorification of work has made us miserable.

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

- A Most employees are not satisfied with their salary.
- B Political slogans significantly affect people’s everyday behaviour.
- C Restructuring the working week would be beneficial for the economy.
- D Companies could afford shorter hours or better pay for their employees.
- E People who experience less stress at work are better parents.

Question 5 (41)

Despite recent improvements to their training, a new study suggests that the police are as susceptible as the general public to holding false beliefs about crime and punishment.

Participants in the study were questioned about their views on a number of crime-related myths such as 'capital punishment is an effective way to deter criminal activity' – myths, because they are unsupported by research evidence. Police were just as likely to endorse the misconceptions as the lay participants and, moreover, were more confident in their false beliefs. This is a worrying example of a 'scientist–practitioner gap', a term which describes a situation where professionals do not accept the evidence of research relevant to their roles. Studies have shown that training can permanently reduce the 'scientist–practitioner gap'. Police officers need more training.

Which one of the following, if true, most strengthens the above argument?

A The recruitment process for new police officers often fails to identify false beliefs held by applicants.

B The majority of police officers do not support the return of capital punishment.

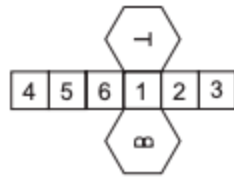
C The science–practitioner gap is a common phenomenon in many professions, not just the police.

D Police training has often been criticised in the media for being insufficiently practical.

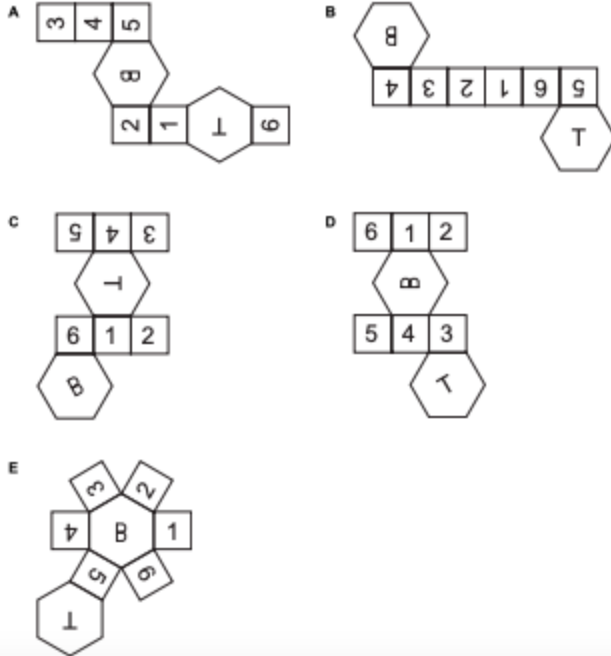
E Police officers whose views are not evidence-based are more likely to have complaints made against them by members of the public.

Question 6 (44)

44 Consider the following net, which forms a hexagonal prism:



Which one of the following nets will form an identical prism?



Question 7 (46)

Your cake will be tasty only if you use fresh ingredients which you can only buy at the market. You did not go to the market, so your cake will not be tasty.

Which one of the following most closely parallels the reasoning used in the above argument?

A You can only be happy if you are healthy. To be healthy, you have to eat a lot of vegetables. You eat a lot of vegetables so you must be happy.

B She either went to school or to the playground. She is not in the playground, so she must have gone to school.

C If you light a candle, there is light and, if there is light, I am able to read to you. You must have lit a candle because I can read.

D Listening to loud music through earphones damages hearing. His hearing is fine which means that he must not have listened to loud music through earphones.

E Good knowledge of the car is necessary for fixing it. Without fixing the car, we will not arrive at the wedding in time. We will surely be late as we do not have good knowledge of the car.

Question 8 (48)

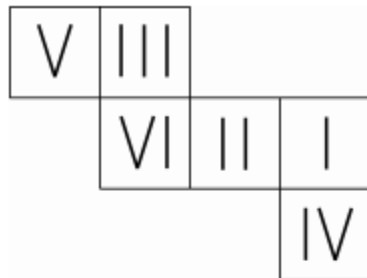
Sourdough, an ingredient of many bread products, is a fermented mixture of flour and water. At 8:00 am on Monday morning, I start with a mixture of 50 g flour and 50 g water. Each morning at 8:00 am I double the weight of the sourdough by adding equal weights of flour and water. I know that 1 g of the water content evaporates every hour. The bread recipe that I would like to use requires 500 g of sourdough. I also want at least 50 g of sourdough left over so that I can continue growing it for next week's bread.

On which day am I going to have the necessary amount of sourdough?

- A Tuesday
- B Wednesday
- C Thursday
- D Friday
- E Saturday

Question 9 (50)

50 The net below can be folded to make a Roman numerical dice.

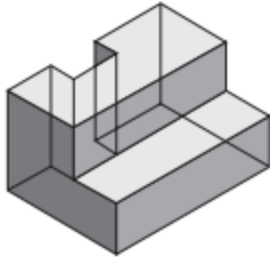


Which one of the following dice could have been made as a result of folding the net?

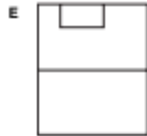
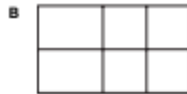
- A
- B
- C
- D
- E

Question 10 (20)

20 The see-through glass block below can be viewed from six sides, including from above and below.



Which one of the following is not a possible view?



Question 11

Are human rights really universal?

Should the police be able to stopyo