

Week 2 Series 2 Answers

Question One

Did not cause too many difficulties as all students are now very proficient at “main conclusion” style questions, which constitute c.10% of the TSA. Here, the answer is A. When looking for the “main conclusion of the argument”, a clear giveaway are words which suggest a change to be made like “should”, “ought”, “must”. Here, the phrase is: “employers should urgently review staffing arrangements...”. You are therefore looking for a rephrasing of that sentence. The best rephrasing is A.

Question Two

A nice simple question which requires students to use check to see if each proposed score can be made.

8.5 points can be: $3 + 3 + 1 + 1.5$

9 points can be: $3 + 3 + 1.5 + 1.5$

9.5 points cannot be made, therefore the answer is C.

Question Three

The argument here is quite simple to grasp: Some expensive films are successful. Some cheap films are successful. Therefore, for people who want to make successful films, people should make cheap films.

The obvious flaw in this argument is that films are generally not successful because they are expensive or cheap to make; they are successful because of other characteristics (e.g. is the plot good? Are the characters believable? Is it well-acted?). The answer is therefore C, which most students got!

Question Four

This did cause some problems. The trust of the argument is along the lines of:

We should legalise cannabis to reduce use of cannabis.

People will only turn away from X when they realise full dangers/damage of X.

The same happened with tobacco smoking.

The implicit assumption here is that, despite the fact that cannabis smoking is widespread, people still do not know the full dangers; if they did know the full dangers, then legalising it (as they did with smoking tobacco) would have no effect. The answer is therefore D.

Question Five

As mentioned in class, one of the strangest and easiest TSA questions I have ever seen; every single student got this correct. The answer is obviously E because Evelyn loses the most weight after 4 weeks (8kg, more than all the others).

Question Six

A harder question. The best way to deal with this question is to think about whether the gradient should become steeper or shallower. Time is on the X axis and Distance away is on the Y axis. Therefore, the gradient should be steep when he is moving quickly; it will be steep upwards when he is going away from home quickly and steep downwards when he is returning home quickly. The gradient will be flat (i.e. horizontal) when he is stationary, as time will pass but distance will not.

We can immediately see that A is wrong because it suggests that he just keeps getting further away from home, when in fact we are told that he drives home very quickly.

1. He drives at a constant speed. This means any gradient, so long as it is positive.
2. He speeds up. The gradient will become steeper.
3. He slows down on the hill. The gradient will become shallower.
4. He stops at the top of the hill The gradient will be flat (i.e. horizontal).
5. He drives back quickly. The gradient will be steep.

The only graph which correctly reflects these changes in gradient is D (note how E does not have the flat gradient to reflect his stop).

Question Seven

A simple calculation question.

Henry II: 35 years
Richard I: 10 years
John: 17 years
Henry III: 56 years
Edward I: 35 years
Edward II: 20 years
Edward III: 50 years
Richard II : 22 years

0-15 years: Richard I (1)
15-30 years: John, Edward II, Richard II (3)
31-45 years: Henry II, Edward I (2)
45-60 years: Henry III. Edward III (2)

Therefore, the answer is E.

Question Eight

Another simple calculation problem.

We need a price per kilogram, so we should multiply the deals by 5. Kostless costs £2.50, with 80p off. We need 5 containers, so it's $(5 \times 2.5) - (5 \times 0.8) = £8.50$. Savemore has 25% extra free. This means we only need 800g of Savemore, since there will be 200g (i.e. a quarter) free. That means 4 jars, so $4 \times 2.5 = £10$. The difference between £8.5 and £10 is £1.50, therefore the answer is A.

Question Nine

The trick here is to ignore the “area (sq km)” and “population density” charts. All you need is the % of EU area, as you’re being asked about how many are needed to make up at least 50%.

We can go through and see that the largest countries are:

France (14.6)
Germany (8.1)
Spain (11.4)
Sweden (10.2)
Finland (7.6)

The easiest way to add these is to add France and Spain together (to get 26) and then add 8.1, 10.2, and 7.6, which is 25.9. Therefore, you get overall to 51.9. Taking away any of these countries would mean going under 50%, so the minimum number must be 5, which is A!

Question Ten

You are all must better than me at shapes! The trick here is to think about how many of the tops of the books you would be able to see if you were facing it from the left-hand end. If one book is taller than another and the taller book is behind, it means you will be able to see the top of both books. If one book is taller than another and the shorter book is behind, it means you will be able to see the top only of the taller book.

From left to right (horizontally), you would be able to see (from the left-hand end), the top of Book 1, Book 2, Book 3, *not* Books 4 or 5, Book 6, and *not* book 7.

Therefore, the impossible view will be the one which does not have four “book-tops” on the left-hand side. C does not have this, as it only has three book-tops on the left-hand side. So the answer must be C.

Question Eleven

The simplest way to work this out is to think about what digits you can make a legal date with in months and days.

All months start with either a 0 (e.g. August is 08) or a 1 (e.g. November is 11)

All days start with either a 0, 1, 2, or 3. If the day starts with a 3, it must be followed by a 0 or a 1 (as there are a maximum of 31 days in a month!)

You cannot use the number “2” as it is present in all the years from 2000 to 2999.

You therefore must make a date where the first number of both the date and month is 0, 1, or 3.

The trick here is to see that you can make a date like 19th August (i.e. 19/08) without using a 3, or any other number between 1-6.

17/08 gives you the ability to use the numbers 2, 3, 4, 5, 6. The earliest year you can make out of these number is 2345, therefore D!

Question Twelve

Quite tricky and requires discipline.

There is 8% rate of interest, and he will need to buy a new car in 8 years. We have the data for how much items costing \$1000 will cost in future years; Raoul's car costs \$10000.

The first thing we need to do is see how much items now costing \$10000 will cost in 8 years at 8% inflation. The table says this is \$1851; therefore, multiplying by \$10, it will be \$18510.

He has \$10,000 in savings which gain interest at 6% per year. The trick here is to see that you can use the table again for 6% interest: 8 years at 6% is \$1594, multiplied by 10 is \$15940.

The difference between the two is the amount he will require to bridge the gap. \$18510 minus \$15940 is \$2570, which is B!

Open Questions

Good answers to these. The 3D printers question in particular generated wide discussion of the risks and benefits that these might pose; more sophisticated answers discussed whether the increase in innovation and the democratisation of production was worth it as against the loss of innovation in R&D as a result of copyright-theft.

The sale of violent video-games was done slightly less well, but still reasonably. It is a difficult question to format a good answer to. I think strong answers could have focused more on the role of video games in desensitising (i.e. rather than causing) violence in our everyday lives and children's view of the military and perhaps stereotyping of combatants.