

## TSA W3 Answers

### Question 1

Nobody had difficulty with this! The approach is nice and simple: calculate how much it would be *without* the discount, then calculate how much it would be *with* the discount, then subtract the latter from the former!

Here, there are two adults and four children for 40 trips. Without the discount, that would be  $40 \times [(2 \times £2) + (4 \times £1)]$ , which is equal to £320.

With the discount, it is;  $£50 + (40 \times £0.5)$ , which is £70.

Therefore, the answer is a nice and simple £250, so answer D.

### Question 2

As discussed in class, this was slightly trickier as you need to know a bit about the concept of insurance works. The flaw is in the sentence: "If more golfers could be encouraged to take out appropriate insurance policies the number of accidents could be dramatically reduced". This is wrong because insurance is not meant to make accidents less likely; it is designed to ensure that you don't have to pay a very high cost if an accident does happen. Hopefully my "hit by a golf ball" example was useful:

Let's say I'm playing golf with Bai and Max. Max is an excellent golfer, but Bai is only a beginner. Max hits a very good first shot. Bai then goes to hit his shot, but accidentally slices the ball and hits Max. Bad news for Max - but thankfully, a week before the golf trip, he took out insurance so that if he is injured on the trip, he won't have to pay money to get better. Note: even if Max had not taken out insurance, it wouldn't have made Bai more or less likely to hit Max.

So the answer must be C.

### Question 3

Nice question and most of you realised you need to find the lowest common multiple of 6, 8, and 18, which is 72. 72 months is 6 years, so the answer is D.

### Question 4

Almost all got this question right. Useful to know that "tenfold" means "10 times". One way to do it is to say: let 2.0 be  $a$ . Therefore, 3.0 is  $10a$  (because it's 10x bigger), and 4.0 is 10x bigger than 3.0 so that is  $100a$ . Once you know this, B is obviously the right answer.

### Question 5

The classic “best expresses the main conclusion” question! Caught many out as always. One way to look at these paragraphs is to work out the format of the argument. Here it is:

[Many people had incorrect belief that X was true]

[Reason why X could not be true]

[Therefore, X is false and Y is true]

One of the giveaways in this argument is the phrase “Given this”. When you see sentences like “given this” or “as a result” or “as a consequence” or “therefore”, it’s often a clue that the sentence which follows those words will be the conclusion. Here, the answer is C because “lawns must have been like flowery meadows” is the conclusion.

### Question 6

You all had no difficulty with this, but it’s actually quite a nuanced question. The quickest way to do it is to see that the load capacity is 400kg, but 1 way 80kg, so the maximum we can take in each load is 320kg.

Here is where it gets interesting. In this situation, you should be able to see that you are always able to fill the entire 320kg lift because, although 320kg is not divisible by 25, it *is* divisible by 20 and that you can stack the lifts in the following way to get to 320kg: (12 bags of 25kg and one bag of 20kg).

So long as you see that this isn’t going to be a fiendishly difficult problem about *how* you stack the lifts (as it would be if e.g. you were told that you had 117 boxes weighing 21.7kg each and 11 boxes weighing 87kg each), you can then just do a nice simple sum: find the total weight you’re trying to move, which is  $(120 \times 25) + (90 \times 20) = 4800$  and divide it by 320. This gives you a nice simple 15, so the answer is D.

### Question 7

The hardest question of the lot. This is a good example of what is often known as the “causation-correlation fallacy”. The classic example is this: When ice cream trucks are on my street, the sun shines. Therefore, the ice cream truck being on my street causes the sun to shine.

This is obviously untrue! We all know that the real explanation for this correlation (i.e. two things happening simultaneously) is that when the sun shines, ice-cream sellers think more people will want ice cream and so drive around trying to sell it. When it rains, the ice-cream sellers stay at home.

This argument has a similar failure. Let’s boil it down to it’s basic components as an argument:  
[Middle-class people are choosing private healthcare]

[Public healthcare standards are declining]

Therefore, [Middle-class people choosing private healthcare is causing public healthcare standards to decline and we should ban that choice]

This argument might not be completely wrong, but it is, at best, unnuanced, and the best explanation is that the causation is the other way round: middle-class people leaving the NHS isn't causing the decline in NHS standards - the decline in NHS standards is causing people to leave!

Therefore, C is the answer. I'll try to find more examples of this question from other papers to try to explain more fully.

### Question 8

Good answers for this but slightly unstructured. Try to have some subpoints for your arguments. For instance:

1. Parking fines are based on deterrence: they encourage people not to park in bad places because people do not want to lose money and so will park in legal places.
2. If people park in bad places, it is bad for society: it leads to inefficient traffic systems, it is unsafe for others, and it can cause congestion. This means more traffic collisions and people will spend more time driving to work and less time working.
3. People who are rich will not be deterred by small monetary fines. If you are Jeff Bezos, you don't care about losing £60!
4. Therefore, we should fine (or threaten to fine) people who are rich more than those who are poor because otherwise we cannot achieve deterrence.

### Question 9

Good answers for this - in these kind of questions, make sure you expand to show all the parts of your argument. So for instance:

1. If life expectancy increases, this will require greater taxation for young people. This is because increased life expectancy is heavily based on an elongation of life for those who are already elderly and frail rather than an improvement of quality of life for those who are around retirement age. Even if life expectancy increases, this does not mean people are able to retire at an older age. Because people live longer, it means they require more care when they are elderly and require more pension payments. A great deal of this care will have to be subsidised by the taxpayer. Therefore, when life expectancy increases so do the number of people requiring care, and therefore taxation will have to increase to meet these needs.

### Question 10

Good discussion on this from the Sunday group. We did not get to it in Tuesday group so I will do summary for it next week.