

TSA Week 9 and Week 10 Answers

Week 9

Question One

In “illustrate the principle” questions, the process is simple: condense the argument put forward into one or two sentences in general terms, and then see if that same principle supports any other argument.

Here, the principle we can “boil down” is effectively summarized for us at the end of the paragraph: To say that something is “natural” is not to say that it is morally good or desirable. (This is sometimes known as the “is-ought” distinction).

Working upwards from E, we can see that no answer except for A functions on the same principle. E is about *perceptions* versus *reality*. D is about generalising from small to large. C is about the principle that not all solutions will work in all situations. B is about the principle that individuals do not always act as they ought to.

Only A illustrates the principle: the “tendency to be competitive” is analogous to “is natural to be competitive”. If we boil it down, A says: just because competitiveness is natural, that does not mean that it is desirable.

Question Two

Nice and simple to work backwards here. George wants to miss no more than the first five minutes of the film, so the latest he can arrive is 19.25. There is a five minute walk from station to cinema, so he must be at the station at latest by 19.20.

There are trains every 40 minutes from Beetown until 21.25, so (working back), there are trains at 20.45, 20.05, 19.25, 18.45, 18.05

Since the trains run regularly between Ayton and Exbay, we know that the time between the final departure from Beetown and the final departure from Exbay is the length of the journey. Here, it is 21.25 to 22.02, so 37 minutes.

37 minutes before 19.20 is 18.43; this is the latest he can leave Beetown station. This means that the 18.45 train is inappropriate, as he will end up being late! He will therefore have to take the 18.05.

From there, we know it is a 14 minute walk to Beetown station. So, 18.05 less 14 minutes is 17.51, therefore the answer is B.

Question Three

A harder question. One way to approach this question is through elimination: you can immediately tick off A (because it has no relevance to the argument), B (because it is far too generalising as a statement), C (because the argument makes no mention of it except to say that the private security firms say self-regulation would be cheaper) and D (because there is no evidence of this on the facts; indeed, the point of the argument seems to be that under government regulation, there is little professional misconduct or corruption). This leaves E, which is the correct answer.

E is also right because the argument draws a clear distinction between (good) government-regulation and (bad) self-regulation. The self-regulation involves regulation by those who are corrupt and engage in unfair practices. Therefore, the underlying assumption is that government-regulation is not like this, or there would be no distinction to make!

Question Four

Another harder question. We have 300 tablets; we used to use 6 every day. This would have meant that, on the old system, it would be finished in 50 days ($300/6$).

Now, we give him 32 a week $[(4 \times 5) + (6 \times 2)]$. Now we use remainders to divide $300/32$. The answer is 9 r.12. The way to interpret this is that we have 9 weeks of use (63 days), and 12 tablets left over.

How are we going to use the 12 left over tablets? Here is where the trick is. If there are only 2 “6 tablet” days per week, then we can effectively “push” those days to the end of the week and have three “4 tablet” days in a row, which means that from our 12 left over tablets we can get three extra days.

Therefore the total number of days we can now get is $63 + 3 = 66$.

Take the original 50 days away to calculate how many “extra” we have: $66 - 50 = 16$, which is C

Question Five

Note that the phrasing of this question is slightly different to others: which “can be drawn as a conclusion” is different to “main conclusion”.

One trick in such questions is to exclude possibilities which are very extreme. Words like “never”, “always”, “impossible”, “without exception”, “must” make very strong statements which do not allow for exceptions. These very strong statements have to be backed up by very strong arguments, and they are rarely the correct answer. By contrast, words like “sometimes”, “may”, “does not necessarily”, “subject to circumstances” give a more nuanced and less extreme conclusion; these are much more often the correct answer.

Here, the answer is D; all the other answers are too “extreme” in their arguments, or try to make a much stronger conclusion than the argument above suggests.

Question Six

A difficult question! The trick here is to work out that there is a necessary relationship between: number sold, price, and total monthly income.

If I sell 100 bananas at £3 each, I can work out my monthly income: £300.

If I have a monthly income of £500 and I sell bananas at £5 each, I know I have sold 100.

If I have a monthly income of £250 and I have sold 50 bananas, I know they cost £5 each.

Here, we want to know when the price changes. $\text{Price} = \text{monthly income} / \text{number sold}$. On the graph, this means that the ratio must change when the price changes; previously, when the price was X, if you sold 10 televisions, the income would be 10x. But if you increase the price to $1/2X$ and sell another 10 televisions, income will only be 5x.

On the graph, the ratio clearly changes in April; previously, the “total monthly income” bar was c.3/5ths the size of the “number sold” bar. However, in April this changes, and they become quite similar in size (closed to 4/5ths as a ratio). This means that the price must change, and so the answer must be C.

Question 7

Immediate trick to notice: “increased by more than 100%” means that they must do more than double. In other words, the price cannot only double.

Moshling Tree House, LeapPad, Doggie Doo all double, as do Sylvanian Families. The trick is to see that Fireman Sam also does, because 29.99×2 is 59.98; but the price here is £59.99, so it does more than double!

The answer is therefore C, 5.

Question 8

Nice and easy process of elimination.

You can make 22 by scoring 12, 5, 5.

You cannot make 26 in any way. Therefore the answer is B!

Question 9

Our best friend, a “main conclusion” argument! As we have seen before, the structure is similar: some people say X. In fact, X is wrong. Here is why X is wrong. The conclusion you’re looking

for is likely to best encapsulate “X is wrong”. Here, X is “there is nothing to learn from historical fiction”, so we are looking for an answer along the lines of “there is something to learn from historical fiction”. From this perspective, the answer is clearly C.

Question 10

Did not cause many problems! Here the argument structure is:

1. Nothing else we know has X property unless it is Y.
2. Therefore it is certain that X is possible only if Y.

The key flaw here is that it assumes that we know enough to be able to move from (1) to (2). Our knowledge is often incomplete! Therefore we are looking for a flaw which focuses on this failure of knowledge. Only A does this, therefore the answer is A.

Question 11

Also did not cause many problems! One quick way to do this is process of elimination: the proportion of banana should be 1.1x greater, whilst the orange should be 0.9x smaller, and the proportion of apple should change (we are told this by the question).

In C and D, the proportion of banana falls; this cannot be right.

In E, there is no change to the proportion of apple; this cannot be right.

In A, the proportion of orange increases; this cannot be right.

Therefore the answer is B.

Question Twelve

Good answers to this, many of which focused on Germany’s treatment of WW2-era statues and memorabilia. Other discussions focused on contextualising monuments and relics. Answers could have been better if they gave a broader range of examples.

Question Thirteen

Very good answers to a difficult question! The common answer seemed to be no and good reasons were given for this (i.e. morality and science are two different fields). Better answers went on to explain that science can provide us with insights into facts upon which morality might be based: e.g. if science were to explain that touching a dog in a certain way caused it pain, then doing so would be morally wrong.

Week 10

Question One

A nice simple intro question to the paper; as discussed, the final sentence here is the giveaway and the most efficient mechanism to work out the correct answer is to find the closest summary of what this final sentence says. Here, that answer is E: “mad” is a propaganda tool (which mirrors “cynically used as a way of dehumanising and discrediting leaders of countries of whom we are in dispute”).

Question Two

Another nice simple question! First, work out the area to mow: $(10 \times 25) - (2 \times 3) = 244\text{m}^2$. The old lawn mower mowed at $1\text{m}^2/\text{minute}$, which means it would take 244 minutes; the new one mows at $2\text{m}^2/\text{minute}$, which means it would take 122 minutes.

The difference between 244 and 122 is (obviously!) 122 minutes, so the answer is A.

Question Three

Attention to detail required here but again, not too challenging. The biggest *increase* in sales on previous month is from March to April. Note that they give the 2012 data only to confuse you, but in other situations it could be relevant, as you would have to check the December 2012 - January 2013 gap.

Question Four

Another question where attention to detail is required. Make sure you read the introduction very carefully; you need to check both the horizontal scores (i.e. the home games) and the vertical scores (i.e. the away games). The only team to score in all of these games is D, Rhine.

Question Five

This question caught many people out as they forgot that you do not need to paint the floor! Here, the dimensions will be:

Ceiling: $8 \times 4 = 32\text{m}^2$

Two Side Walls: $2 \times (8 \times 3) = 48\text{m}^2$

Two End Walls: $2 \times (3 \times 4) = 24\text{m}^2$

Combined, this is 104m^2 ; from this, we need to remove the 10m^2 as mentioned in the question. We therefore need to paint 94m^2 .

One paint tin holds 8 litres; 1 litre paints 12m^2 , so a tin paints $(12 \times 8)\text{m}^2$, which is 96m^2 . Since we only need to paint 94m^2 , one tin will be enough, so the answer is A.

Question Six

My favourite type of question!

The argument structure here is: Either X (getting cleverer) or Y (getting easier) is true. No evidence for X, therefore Y.

The question does a good job of confusing people who do not do this argument simplification. Have a look at A for instance: Farmers must choose between using organic or non-organic fertilisers on their land. At first appearances, you might write this as "Either X or Y". But that would be wrong! Farmers are not picking whether X or Y is *true*; when we go to the supermarket and have to pick between ketchup and mayonnaise, we would never say that: ketchup or mayonnaise is true.

What we are looking for is a choice between two factual possibilities, only one of which can be true. The only answer to demonstrate this is C, which is the correct answer.

In C, "Alarms are either X or Y. This meerkat is not Xing, therefore Y".

Question Seven

As last week, the "underlying principle" can be found here in the penultimate sentence: "it is not the role of the government to stop people from harming themselves". This means that people should be able and allowed to run the risks that they want, regardless of how risky they are.

B should immediately jump out at you as an illustration of this principle: recreational drugs (it is often argued) are only illegal because of the risk and the harm they do to the person who chooses to do the drugs. If the government isn't allowed to do this, then the drugs should be legalised!

Question Eight

As mentioned in class, the document should say "1/4 of X and 3/4 of Y".

He originally has 1.5kg X and 4.5kg Y. He wants to get to a position where 4.5kg is 60% of overall mixture. This means 10% would be $(4.5/6) = 0.75$, so 100% would be 7.5kg. Therefore, there should be 3kg X in the final mix, so he needs to add 1.5kg to his existing 1.5kg to get there. The answer is therefore B.

Question Nine

Easiest to get a piece of paper and make notes of who votes for where.

Jo: Portugal, France, Greece
Mel: Portugal, France, Tenerife
Naz: Tenerife, France, Majorca
Kim: Majorca, France, Tenerife
Lexy: Greece, Tenerife, France

Portugal gets (2×3) , so 6 points overall.
France gets $(4 \times 2) + (1 \times 1)$, so 9 points overall
Greece gets 3 votes.
Majorca gets 4 votes
Tenerife gets $1 + 3 + 1 + 2$, so 7 points.

But wait! The friends have decided not to go anywhere which isn't anyone's first choice, so France is out of the question. The answer is therefore Tenerife.

Question Ten

The quickest way to do this is sensible trial and error. Majors get 5 points, minors get 3 points. The Blues score twice as many majors as minors to get 52. We know therefore that the number of majors scored must be even, and it must be less than 10 (since 10×5 would be 50, leaving not enough room for the minors' scores). Moving down from 10, we next check eight: $(8 \times 5) + (4 \times 3) = 52$, so we know that the Blues score 8 majors.

The Reds score twice as many minors as majors to score 77. The number of minors scored must therefore be even and we know it must be less than 20 (because 20×3 would be 60, with 10×5 as 50, giving a score of 110, which is too much). 18 is also too much $[(18 \times 3) + (9 \times 5) > 77]$; 16 is too much for the same reason. 14 works! $[(14 \times 3) + (7 \times 5) = 77]$. Therefore 7 majors were scored.

$8 + 7$ is 15, therefore C.

Open Questions

Good answers to both questions. Scientific research tended to focus on the difficulty of knowing what would be of direct benefit and how; good examples, including the Space Race, were given of how incidental benefits in science and technology can be useful. However, others put forward good arguments to suggest that a good deal could be better dealt with by the private sector.

On the convicted criminals front, good arguments were put forward for delineating certain crimes from others, whilst others pursued the view that prisoners might use their geographical density

to win elections. One particularly good answer focused on how these interests were legitimate and should be respected in a democratic society, regardless of the crimes committed.