TBS Admission Test – Academic guide

Our Admission Test consists in three parts:

1. **Verbal Reasoning:** Measures your ability to understand and process written information (19 minutes).
2. **Logical Reasoning:** Measures your ability to infer patterns and sequences using abstract stimuli (25 minutes).
3. **Numerical Reasoning:** This test assesses your capacity to extract quantitative information from tables, graphs and charts and arrive to logical conclusions. It is not content related, but requires knowledge in arithmetic and algebra (25 minutes).

Below find some examples of the different parts and click **here** to practice a full-length test.

Verbal reasoning test

In a verbal reasoning test, you are usually provided with a passage of text followed by one or more statements. In the example below, determine whether each statement is true or false, or whether you cannot say, given the information in the passage:

A. **True** (the statement follows logically from the information or opinions contained in the passage)
B. **False** (the statement is logically false from the information or opinions contained in the passage)
C. **Cannot say** (cannot determine whether the statement is true or false without further information)

Remember to base your answers only on the information given in the passage.

Example 1

"Many organisations find it beneficial to employ students over the summer. Permanent staff often wish to take their own holidays over this period. Furthermore, it is not uncommon for companies to experience peak workloads in the summer and so require extra staff. Summer employment also attracts students who may return as well-qualified recruits to an organisation when they have completed their education. Ensuring that the students learn as much as possible about the organisation encourages interest in working on a permanent basis. Organisations pay students on a fixed rate without the usual entitlement to paid holidays or bonus schemes."

Statement 1: It is possible that permanent staff who are on holiday can have their work carried out by students.
   A. True
   B. False
   C. Cannot say

Statement 2: Students in summer employment are given the same paid holiday benefit as permanent staff.
   A. True
   B. False
   C. Cannot say

Statement 3: Students are subject to the organisation's standard disciplinary and grievance procedures.
   A. True
   B. False
   C. Cannot say

Statement 4: Some companies have more work to do in the summer when students are available for vacation work.
   A. True
   B. False
   C. Cannot Say

Answers for Example 1

> **Statement 1**
   This statement is true (Option A) as the passage states: "Many organisations find it beneficial to employ students over the summer. Permanent staff often wish to take their own holidays over this period."

> **Statement 2**
   This statement is false (Option B) as the passage states: "Organisations pay students on a fixed rate without the usual entitlement to paid holidays or sick leave."

> **Statement 3**
   We cannot say whether this statement is true or false (Option C) as the passage does not make reference to the discipline or grievance procedures for students.

> **Statement 4**
   This statement is true (Option A) as the passage states: "Furthermore, it is not uncommon for companies to experience peak workloads in the summer..."

Example 2
"In many organizations, middle management positions can be difficult, especially during periods of significant change. While trying to do their best to implement changes imposed by senior management, they may realise that promoting the interests of the organisation often conflicts with their own best interests, and those of their colleagues and subordinates.

Such realisations can sometimes result in high levels of additional stress for those managers. No effective solution to this problem has been found and, if the way in which most organisations operate does not change in some relevant way soon, it is likely that we will see an increase in absenteeism and turnover amongst middle managers."

Question 1: Conflicts of interest are common for middle managers during periods of organisational change.
   A. True
   B. False
   C. Cannot say

Question 2: Middle managers, who realise that they have to implement changes that are imposed upon them that are not in line with their own best interests, will always experience stress as a result.
- A. True
- B. False
- C. Cannot say

Question 3: If the way in which most organisations operate changes soon in some relevant way, it is likely that we will see a decrease in absenteeism and turnover among middle managers.
- A. True
- B. False
- C. Cannot say

Question 4: Some middle managers have to operate in ways that may interfere with their own interests.
- A. True
- B. False
- C. Cannot say

Answers 2 for Example 2
- > **Question 1**: True
- > **Question 2**: False
- > **Question 3**: Cannot say
- > **Question 4**: True

Example 3
"Genuine altruism, when defined as 'selfless helping', has been shown in recent years to be a most elusive, indeed paradoxical, concept. In fact, some people now view it as some kind of ideal that never really existed. How could anybody be entirely selfless and help without any exception of a reward of some type? According to some people, the pleasure of helping is itself its own reward, whereas others also mention the displeasure that would accompany refusal to help somebody in need as the motive underlying altruistic behaviour. True believers suggest that altruism, based on the notion of selfless helping, should be something that we all strive towards."

Question 1: We can now say that altruistic behaviour, that is selfless helping, used to be better understood in the past.
- A. True
- B. False
- C. Cannot say

Question 2: There is currently no consensus surrounding the true motives for perceived altruistic helping.
- A. True
- B. False
- C. Cannot say

Question 3: Helping is never genuinely selfless.
- A. True
- B. False

C. Cannot say

Question 4: Some people may be unsure about whether their perceived selfless helping behaviour is really selfless.
   A. True
   B. False
   C. Cannot say

Answers 2 for Example 3
> **Question 1**: Cannot say
> **Question 2**: True
> **Question 3**: Cannot say
> **Question 4**: True

Numerical Reasoning

In a numerical reasoning test, you are required to answer questions using facts and figures presented in statistical tables. In each question you are usually given a number of options to choose from. Only one of the options is correct in each case. Test takers are usually permitted to use a rough sheet of paper and/or a calculator. However, the use of a calculator may not be permitted in all tests.

Example 1

Newspaper Readership				
Daily Newspapers	Readership (millions)		Percentage of adults reading each paper in Year 3	
	Year 1	Year 2	Males	Females
The Daily Chronicle	3.6	2.9	7	6
Daily News	13.8	9.3	24	18
The Tribune	1.1	1.4	4	3
The Herald	8.5	12.7	30	23
Daily Echo	4.8	4.9	10	12

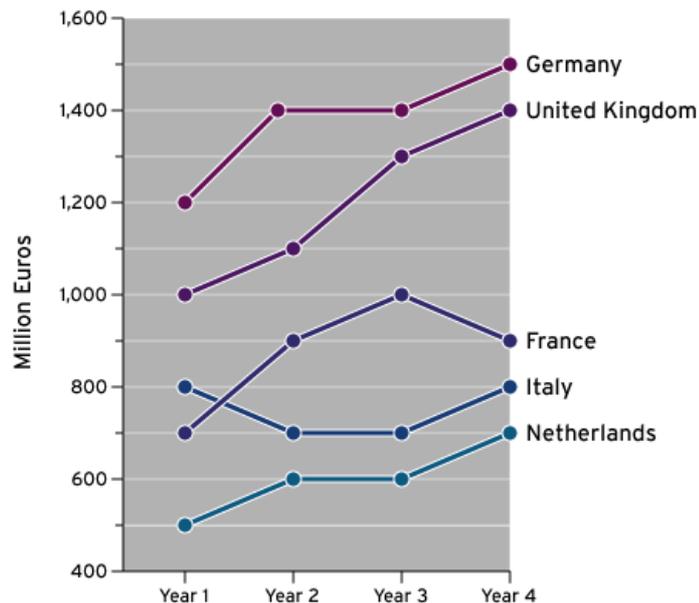**Question 1:** Which newspaper was read by a higher percentage of females than males in Year 3?
    A. The Tribune
    B. The Herald
    C. Daily News
    D. Daily Echo
    E. The Daily Chronicle

Question 2: What was the combined readership of the Daily Chronicle, the Daily Echo, and The Tribune in Year 1?
    A. 10.6
    B. 8.4
    C. 9.5
    D. 12.2
    E. 7.8

Amount Spent on Computer Imports

Question 3: In Year 3, how much more than Italy did Germany spend on computer imports?
- A. 650 million
- B. 700 million
- C. 750 million
- D. 800 million
- E. 850 million

Question 4: If the amount spent on computer imports into the United Kingdom in Year 5 was 20% lower than in Year 4, what was spent in Year 5?
- A. 1,080 million
- B. 1,120 million
- C. 1,160 million
- D. 1,220 million
- E. 1,300 million

Answers for Example 1

> **Question 1**
  To answer this question, you need to compare the data in the column 'Percentage of adults reading each paper in Year 3' from the Newspaper Readership table. The only newspaper with more female than male readers is the Daily Echo. Therefore, the answer is D.

> **Question 2**
  To answer this question, you need to look at the data in the 'Year 1 Readership (millions)' column from the Newspaper Readership Table. To calculate the combined readership for the three newspapers mentioned, add the readership numbers. Therefore, the solution to this answer would be calculated as shown below and the answer is C.

  The Daily Chronicle readership   3.6 million

Daily Echo readership   4.8 million
The Tribune readership   1.1 million
TOTAL READERSHIP   9.5 million

> **Question 3**
To answer this question, you need to look at the figures from Germany and Italy for Year 3 in the 'Amount Spent on Computer Imports' graph. Germany spent 1,400 million Euros and Italy spent 700 million Euros. To work out how much more Germany spent than Italy, simply calculate the difference (1,400 million – 700 million), which leaves 700 million euros. Therefore, the answer is B.

> **Question 4**
To answer this question, you need to look at the figures from the UK in Year 4 from the 'Amount Spent on Computer Imports' graph. From here, we can see that 1,400 million euros was spent in Year 4. To calculate the amount spent on computer imports in Year 5, we need to calculate 20% of 1,400 million and the answer is B.

1,400 (million) x 0.20 = 280 million (this is 20% of 1,400 million)
1,400 million – 280 million = 1,120 million

Example 2

World Fossil Fuel Regulation			
UK Coal Energy			
UK Mines	Extraction (000s tonnes) per year	Electricity production per Kg (units)	Remaining coal (millions of tonnes)
Folen	46,324	17.0	68.27
Dirme	34,953	12.3	70.95
Ilt	74,036	14.2	62.73
Ryken	13,684	21.0	61.02
All Others	385,306	14.7	82.63

> 1 tonne = 1,000 kilograms
> An average UK household utilises 4.5 units of electricity per day
> One unit of electricity is sold for £0.08

Question 1: Which mine can produce the greatest amount of units of electricity before it runs out of coal?
    A. Folen
    B. Dirme
    C. Ilt
    D. Ryken
    E. All others

Question 2: At the continued rate of extraction, in how many years is the coal from the Folen Mine likely to run out?
    A. 1.5 years

B. 3 years
C. 4.5 years
D. 6 years
E. 7.5 years

Question 3: If there are 22.36 million homes in the UK, approximately how much money in total do UK households pay for their electricity per year? Assume 365 days in year.
   A. £850,000
   B. £2.94 million
   C. £8 million
   D. £652 million
   E. £2.938 million

Question 4: What is the total number of units (in millions) of electricity produced each year based on the current extraction rates of coal from all mines combined assuming all mines have an endless supply of coal?
1.05 million
4.29 million
7.87 million
8.2 million
11.9 million

Answers for Example 2
> **Question 1**: Ryken
> **Question 2:** 1,5 years
> **Question 3:** £ 2.938 million
> **Question 4:** 8,2 million

Example 3

Newmellum Retails Outlets							
Staff			Purchase Quantity	Cost to Company per item			
Type	No	Dress code*		Trousers	Suits	Shirts	Shoes
Office	212	Admin	1-10	£13.54	£137.65	£7.67	£32.35
Sales	64	Admin	11-25	£8.64	£112.35	£5.23	£28.64
Senior	16	Admin	26-50	£8.26	£98.34	£4.25	£23.65
Delivery	33	Operational	51-99	£7.64	£85.64	£4.05	£20.32
Warehouse	112	Operational	100+	£7.49	£76.15	£3.26	£18.64
*Operational workers are only entitled to shirt, trousers and shoes. Admin workers are only entitled to suits with shoes.							

Question 1: If all staff, both operations and admin, were required to wear trousers, shirts and shoes, how much would this cost the company?
   A. £4,698
   B. £12,843
   C. £18,648
   D. £27,364
   E. £33,615

Question 2: What percentage discount is offered on admin uniforms for purchase quantities greater than 100, compared to the price for the smallest purchase quantity?
   A. 42.4%
   B. 44.2%
   C. 49.9%
   D. 55.8%
   E. 57.6%

Question 3: Which type of staff will cost the company the least in providing uniforms?
   A. Office
   B. Sales
   C. Senior
   D. Delivery
   E. Warehouse

Question 4: How much money would the company save if delivery staff and warehouse staff wore the same uniforms and their purchase could therefore be combined?
   A. £136.95
   B. £223.41
   C. £346.50
   D. £432.96
   E. £516.85

Answers for Example 3
> **Question 1**: £ 12.843
> **Question 2**: 44,2%
> **Question 3**: Delivery
> **Question 4**: £ 223.411

Logical Reasoning

An inductive reasoning test measures abilities that are important in solving problems. They may also be referred to as abstract reasoning tests or diagrammatic style tests. These tests measure the ability to work flexibly with unfamiliar information and find solutions. People who perform well on these tests tend to have a greater capacity to think conceptually as well as analytically.
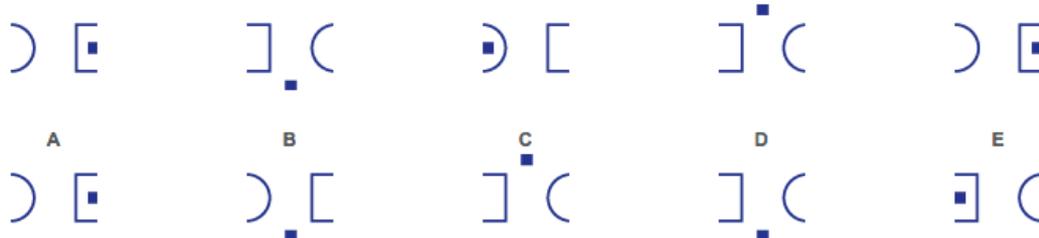
In each example given below, you will find a logical sequence of five boxes. Your task is to decide which of the boxes completes this sequence.

Example 1

Question 1

A   B   C   D   E

Question 2

A   B   C   D   E

Question 3

A   B   C   D   E

Question 4

A   B   C   D   E
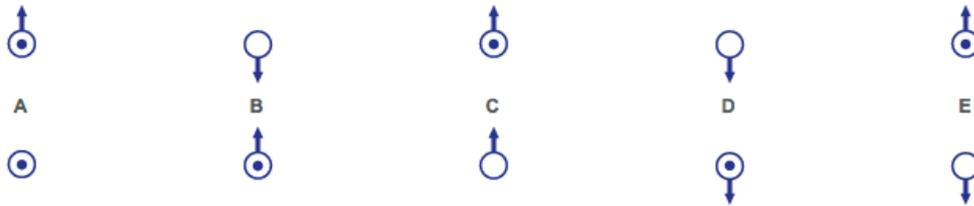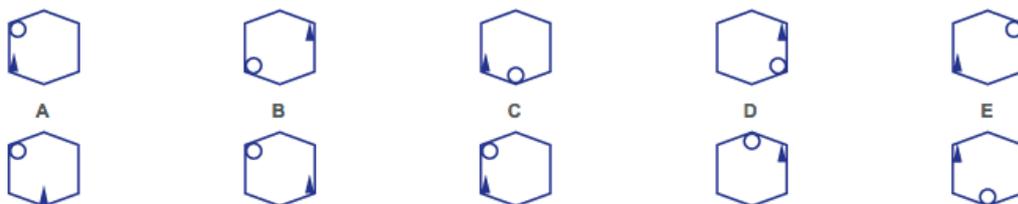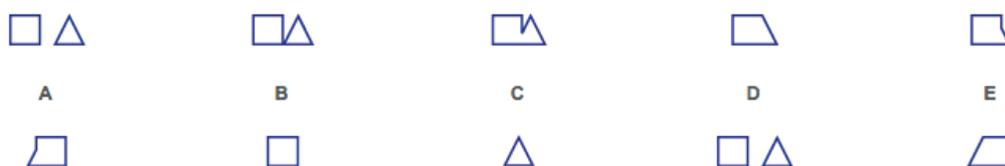
Answers for Example 1

> **Question 1**

In this example, there are two rules to follow. The first is that the centre of the circle follows the pattern that alternate circles have a dot in the centre. Following this rule, the next diagram in the sequence does not have a dot in the centre. Therefore, the correct answer must be C or E. The second rule is that the arrows change the direction that they point from up to down to back up again. Following this, the next diagram in the sequence must contain an arrow that points down. Therefore, the correct answer is E.

> **Question 2**

In this example, there are two rules to follow. The first is that the semi-circle and semi-rectangle swap positions. Following this rule, the next diagram in this sequence will contain a semi-rectangle on the left side of the pattern and a semi-circle on the right side of the pattern. Therefore, the correct answer is C, D or E. The second rule is that small black square rotates clockwise. Following this pattern, the next diagram will contain a small back square at the bottom of the box. Therefore, the correct answer is D.
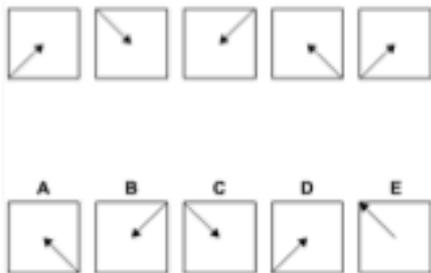
> **Question 3**

In this example, there are two rules to follow. The first is that the circle rotates around the inside of the hexagon in an anti-clockwise direction. Following this rule, the next diagram will have a circle in the top corner of the hexagon. Therefore, the answer must be D. This can be confirmed by following the second rule that the black triangle alternates position from the bottom left of the hexagon to the top right and back to the bottom left again. Following this pattern, the next diagram must contain a black triangle in the top right corner of the hexagon. This confirms that the answer is D.
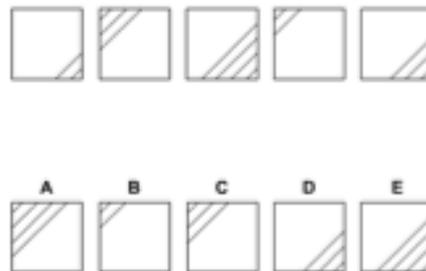
> **Question 4**

In this example, there is one rule to follow. This is that the square and triangle slowly move towards the centre and finally merge. The next diagram must contain the square and triangle fully merged and therefore the answer is B.
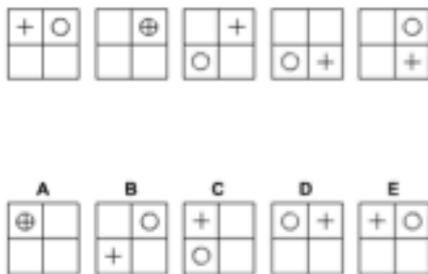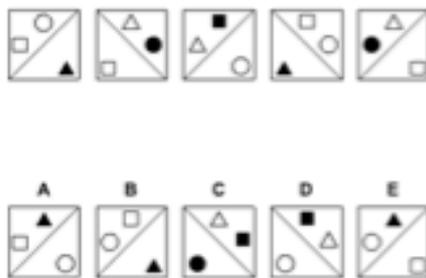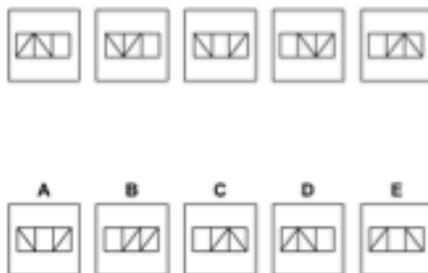
Example 2

Question 1

Question 2

Question 3

Question 4

Question 5

Question 6
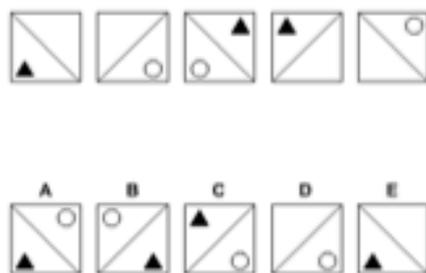
Question 7
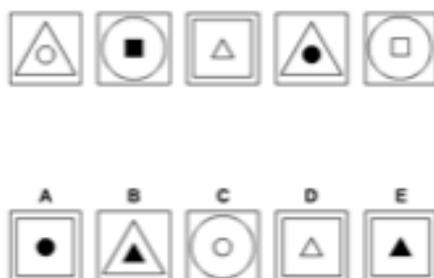
Question 8
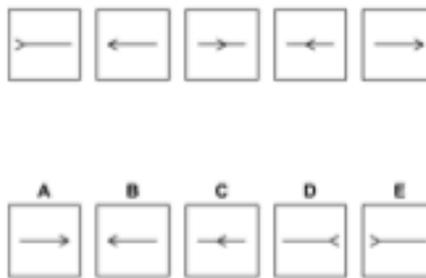
Answers for Example 2

> **Question 1:** C
> **Question 2:** A
> **Question 3:** B
> **Question 4:** D
> **Question 5:** E
> **Question 6:** B
> **Question 7:** E
> **Question 8:** D