

**Product Title:** 11+ Trafford Grammar Schools Consortium:

Practice Test 7

**Contents:** Paper A 48 pages

Paper B 43 pages

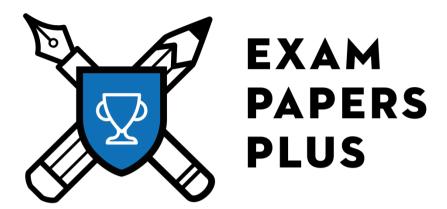
Paper A Answer Sheets 9 pages

Paper B Answer Sheets 9 pages

Answers 29 pages

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# 11+ Trafford Grammar Schools Consortium Practice Test 7

## Paper A

Approx. 60 minutes

#### 64 marks

- This paper is divided into smaller, individually-timed sections that test Verbal Reasoning, Mathematics and Non-Verbal / Spatial Reasoning.
- Each section starts with some untimed practice questions.
- All answers should be marked on the separate answer sheet provided.

Please turn over the page to begin the Verbal Reasoning Practice section.

## **Verbal Reasoning Practice**

#### (untimed)

This practice section gives examples of the sort of questions you will meet in the Verbal Reasoning section with the correct answer filled in on the answer sheet so that you can see how to do it.

There are also some practice questions that don't have the answers filled in so that you can practise working them out for yourself and filling in the answer sheet.

Read this passage carefully, then answer the questions that follow.

#### The Marathon

- 1 The marathon is an endurance running event with an official distance of
- 2 42.195 kilometres. It was instituted to commemorate the fabled run of the
- 3 Greek soldier Philippides, a messenger from the Battle of Marathon to Athens,
- 4 who reported the victory. The marathon was one of the original modern Olympic
  - events in 1896, though the distance did not become standardised until 1921.

Please answer these questions. (Look at the passage again if you need to.) You should choose the **best** answer and mark its letter on your answer sheet.



5

#### **Example**

Why did Philippides run from the Battle of Marathon to Athens?

- A He was fleeing the battle.
- **B** He wanted to inform his friends that the battle had been lost.
- C He enjoyed keeping fit.
- D He wanted to inform those in Athens that the battle had been won.
- **E** He ran to Athens by mistake.

The answer is **D**. The passage states that Philippides was a messenger and that he ran to Athens and 'reported the victory', so it is clear that he wanted to inform those in Athens that the battle had been won.

The answer **D** has been marked on the answer sheet.

Now try this practice question. You should choose the **best** answer and mark its letter on the answer sheet.

#### 1 Practice

What type of event is the marathon?

- A a sprint
- B a middle-distance running race
- C a mixed track and field event
- D a relay race
- E an endurance running event

Now try this practice question about the meaning of words as they are used in the passage.

#### Practice

Which of the following is closest in meaning to 'commemorate'? (line 2)

- A remember
- **B** provide
- C satisfy
- D commiserate
- **E** destroy

In these sentences, the word in capital letters has had three letters next to each other taken out. These three letters make one correctly spelt word without changing their order.

Mark the correct three-letter word on your answer sheet.

The sentence that you make must make sense.

P Example

For how many days will you go on HOAY?

A LAD B PIN C LID D NOT E FUN

The three-letter word that has been removed from **HOAY** is '**LID**'. If we place this three-letter word between HO and AY, it makes the word **HOLIDAY** and so completes the sentence in a sensible way. The correct answer has been marked on the answer sheet.

Now try the practice questions and mark your answers on the answer sheet.

O Practice

My PNTS do not share my taste in music.

A EAR B ORE C ARE D ONE E IRE

Practice

The **RESTAUT** offers a children's menu.

A RAN B BAN C CAN D TON E PAN

Page 4

Please go on to the next page >>>

In these sentences, a word of **four letters** is hidden at the **end** of one word and the **beginning** of the next word.

Find the pair of words that contains the hidden word and mark this answer on your answer sheet.

## **Example**

My scar took weeks to fade.

- A My scar
- **B** scar took
- C took weeks
- D weeks to
- E to fade.

In this sentence, the hidden four-letter word is 'cart', which is made up of the last three letters of the word 'scar' and the first letter of the word 'took'. So the pair of words that contains the hidden word is 'scar took'. This has been marked on your answer sheet.

Now try the practice questions and mark your answers on the answer sheet.

## Practice

Police secretly followed the green vehicle.

- A Police secretly
- **B** secretly followed
- C followed the
- **D** the green
- E green vehicle.

## Practice

Her baby girl always looks content.

- A Her baby
- **B** baby girl
- C girl always
- D always looks
- E looks content.

#### **END OF PRACTICE**

The Verbal Reasoning section begins on the next page.

- You have 15 minutes to complete the Verbal Reasoning section.
- There are 20 questions to answer.
- Your time will start when you turn over the page.
- Do not turn over the page until you are told to do so.

Page 6 END OF PRACTICE

## **Verbal Reasoning**

(15 minutes)

Read this passage carefully, then answer the questions that follow.

#### Chicken Unga Fever, by Dr Phil Whitaker

GPs can be divided into two distinct groups: "buzzers" and "meeters". The former stay put in their consulting rooms, employing a variety of devices such as buzzers or intercoms to call their patients through. "Meeters", on the other hand, walk along to collect each patient from the waiting room in person.

We are "meeters" in my practice. I like the brief interlude of physical activity, which helps clear the mind in readiness for the next consultation. Equally important is the opportunity to begin putting patients at ease, greeting them with a smile and making small talk as we walk the corridor together. The rapport-building helps the consultation get off to a good start, rather than the patient arriving "cold" at my consulting room door.

"Meeting" also provides valuable advance information. Musculoskeletal problems are the most obvious: back pain is instantly recognisable from the way someone gets out of their chair.

Please answer these questions. (Look at the passage again if you need to.)
You should choose the **best** answer and mark its letter on your answer sheet.

- Which one of the following is NOT mentioned as an advantage of being a "meeter"?
  - A It gives the GP a chance to get some fresh air.
  - **B** It gives the GP a chance to connect with their patients.
  - C It gives the GP time to mentally prepare for their next patient.
  - **D** It gives the GP a chance to put patients at their ease.
  - **E** It gives the GP a chance to detect certain conditions in their patients.

Page 7

10

Please go on to the next page >>>

## Which words are synonyms of 'distinct'? (line 1) Choose TWO.

- 1 large
- 2 separate
- 3 colossal
- 4 variable
- 5 different
- A 1 and 2
- **B** 2 and 4
- C 3 and 4
- **D** 1 and 5
- E 2 and 5

## Which one of the following best describes 'small talk'? (line 8)

- A a very brief conversation
- **B** polite conversation about unimportant things
- C conversation about deep and meaningful things
- **D** a short conversation between complete strangers
- **E** an awkward conversation about difficult matters

## What does the word "cold" mean in line 10 with regards to patients?

- A They have the cold virus.
- **B** They are shivering and unable to warm up.
- C They do not show any emotion.
- **D** They have arrived without making an appointment.
- **E** They have not had a chance to ease into conversation.

Page 8

Please go on to the next page >>>

In these sentences, the word in capital letters has had three letters next to each other taken out. These three letters make one correctly spelt word without changing their order.

Mark the correct three-letter word on your answer sheet.

The sentence that you make must make sense.

5	The cream is supposed to get rid of <b>WRLES</b> .
---	----------------------------------------------------

A EAT B ANT C INK D ARE E BUN

The prisoner was placed in **SOLIY** confinement.

A TAR B TAN C CAR D PAN E WAR

My sister will announce her **ENGAENT** at the party.

A GIN B RAT C MAN D GEM E TEN

My father is a TECHNOPE.

A HIP B OUT C HOB D NIB E BAN

Dan plans to join the **DEING** society at university.

A IRE B BAT C HOP D PAT E RAW

10	My brother <b>DISTLED</b> his radio to see how it worked.							
	<b>A</b> BAR	B BAN	C TIE	D	SON E	MAN		
11	Leo loves to be in the <b>SLIGHT</b> .							
	A SIT	B LOT	C TAB	D	POT E	ART		
12	The <b>POTAS</b> are delicious and crispy.							
	A TOE	<b>B</b> TOW	C NOT	D	NET E	SAT		

Page 10

In these sentences, a word of **four letters** is hidden at the **end** of one word and the **beginning** of the next word.

Find the pair of words that contains the hidden word and mark this answer on your answer sheet.

- One avocado neatly decorated the dish.
  - A One avocado
  - B avocado neatly
  - C neatly decorated
  - D decorated the
  - E the dish.
- Their submarine attacked the unsuspecting liner.
  - A Their submarine
  - **B** submarine attacked
  - C attacked the
  - D the unsuspecting
  - E unsuspecting liner.
- Wilf logically explained his mindful reasoning.
  - A Wilf logically
  - B logically explained
  - C explained his
  - D his mindful
  - E mindful reasoning.

1 C Dad bellowed from his lowered window.

- A Dad bellowed
- B bellowed from
- **C** from his
- D his lowered
- E lowered window.
- 1 7 Our guru delivered an amazing speech.
  - A Our guru
  - **B** guru delivered
  - C delivered an
  - D an amazing
  - E amazing speech.
- 1 Q Carrie needs to consult her barrister.
  - A Carrie needs
  - B needs to
  - C to consult
  - D consult her
  - E her barrister.

- Grandad ripped his favourite trousers today.
  - A Grandad ripped
  - B ripped his
  - C his favourite
  - p favourite trousers
  - E trousers today.
- I have one muffin every day.
  - A I have
  - B have one
  - **C** one muffin
  - D muffin every
  - E every day.

END OF VERBAL REASONING SECTION

DO NOT TURN OVER THE PAGE UNTIL YOU ARE TOLD TO DO SO.

#### **Mathematics Practice**

#### (untimed)

This practice section gives an example of the sort of question you will meet in the Mathematics section with the correct answer filled in on the answer sheet so that you can see how to do it.

There are also some practice questions which don't have the answers filled in so that you can practise working them out for yourself and filling in the answer sheet.

Work out the correct answer and mark its letter on the answer sheet.



#### **Example**

I think of a number.

I triple my number and then I add 7.

The final result is 28.

What was the number that I started with?

A 21 B 35 C 14 D 0 E 7

The answer is **7**. You can work this out by taking the final result, 28, and reversing the steps described. Addition becomes subtraction (28 - 7 = 21) and tripling becomes finding one-third  $(21 \div 3 = 7)$  to give you a starting number of **7**.

The correct answer has been marked on the answer sheet.

Now try these practice questions.

Work out the correct answer and mark it on the answer sheet.

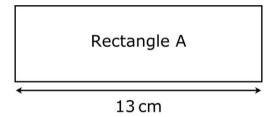
1 Practice

Which of these numbers is NOT a square number?

A 16 B 25 C 39 D 1 E 81

Practice

The perimeter of Rectangle A is 34 cm.



What is the width of Rectangle A?

**A** 4 cm **B** 12 cm **C** 13 cm **D** 6 cm **E** 8 cm

#### **END OF PRACTICE**

The Mathematics section begins on the next page.

- You have 20 minutes to complete the Mathematics section.
- There are 20 questions to answer.
- Your time will start when you turn over the page.
- Do not turn over the page until you are told to do so.

Page 15 END OF PRACTICE

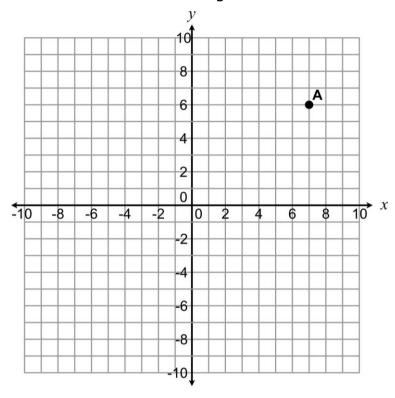
#### **Mathematics**

#### (20 minutes)

Work out the correct answer and mark its letter on the answer sheet.

1

Point A is marked on a coordinate grid.



Point A is reflected in the horizontal (x) axis.

It is then reflected in the vertical (y) axis.

What are the new coordinates of Point A?

- **A** (-6, -7)
- **B** (6, -7)
- **C** (-7, -6)
- **D** (6, 7)
- **E** (7, 6)

Page 16

Posy pays for 12 CDs, each costing £0.22, with a £5 note. The cashier gives her the fewest coins possible in change.

How many coins does the cashier give Posy?

- **A** 3
- **B** 4
- **C** 5
- **D** 6
- E 7

Toby has a combination lock on his bicycle.

There are four dials that each have the digits 0 to 9 on them.

Toby changes the four-digit combination every day.

For how many days can Toby change the combination of four digits before he will have to start repeating combinations?

- **A** 40
- **B** 36
- **C** 1000
- **D** 6561
- E 10000

4

A rectangular field has a width that is half its length.

If the perimeter of the field is 66 m, what is its width?

- **A** 24 m
- **B** 11 m
- **C** 16 m
- **D** 99 m
- **E** 6 m

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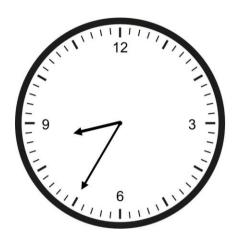


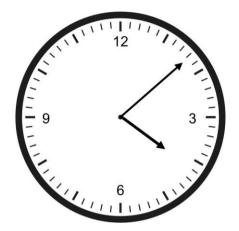
How many 60 ml eggcups can be filled from three of these buckets?

- **A** 60
- **B** 1200
- **C** 600
- **D** 200
- E 2000

The clock on the left shows the time a plane took off from London.

The clock on the right shows the time it landed in Cairo. Both clocks show local time, i.e. the time at that location.





If Cairo is two hours ahead of London, how long was the flight?

- A 5 hours 33 minutes
- **B** 7 hours 33 minutes
- **C** 9 hours 33 minutes
- **D** 7 hours 17 minutes
- E 5 hours 17 minutes

0.0210

0.2105

0.2210

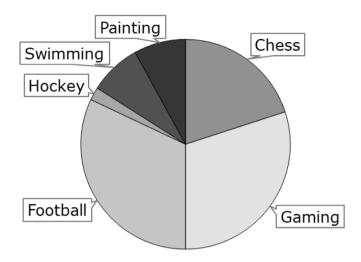
0.2220

0.2122

Put these numbers in order from largest to smallest.

- **A** 0.2220, 0.2210, 0.2122, 0.2105, 0.0210
- **B** 0.0210, 0.2105, 0.2122, 0.2210, 0.2220
- C 0.2220, 0.2122, 0.2210, 0.2105, 0.0210
- **D** 0.2105, 0.2210, 0.2220, 0.2122, 0.0210
- **E** 0.2220, 0.2210, 0.2105, 0.2122, 0.0210

The pie chart shows how 250 students voted when asked which pastime was their favourite.



The angle of the chess segment is 72°.

Ten times fewer students voted for hockey than chess.

62% of students voted for football or gaming.

The same number of students voted for swimming as for painting.

#### How many students voted for painting?

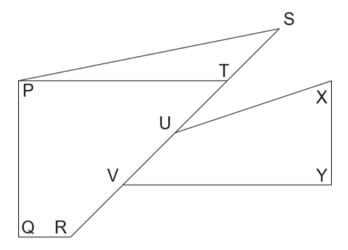
- **A** 50
- **B** 72
- **C** 25
- **D** 20
- E 75

Tony buys 8 identical bags of sweets for a total of £3.68

How much would 5 bags of sweets cost?

- A £2.30
- **B** £3.30
- C £5.89
- **D** £4.12
- **E** £6.30

Here is a network of lines.

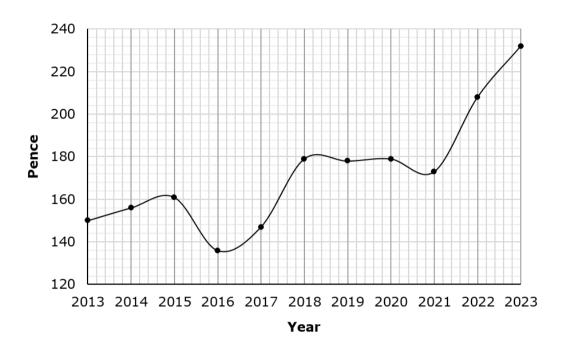


The angles at P, Q and Y are right angles.

Which one of the following statements about the network of lines is NOT true?

- A Line PQ and Line XY are parallel.
- **B** Line PT and Line XY are perpendicular.
- C Line SR and Line QR are perpendicular.
- **D** Line PT and Line QR are parallel.
- **E** Line PT and Line VY are parallel.

The graph shows how the price of a 250 g block of butter changed between 2013 and 2023.



How much more does 1 kg of butter cost in 2023 than in 2016?

- A £3.68
- **B** £1.36
- C £2.32
- **D** £0.96
- E £3.84

To work out the exterior angle of a regular polygon, you can divide 360° by the number of vertices on the polygon.

To work out the interior angle of a regular polygon, you can subtract the exterior angle from 180°.

What is the interior angle of a regular decagon?

- **A** 36°
- **B** 72°
- C 144°
- **D** 216°
- E 180°

13

2 zods are the same as 3 zids, and 1 zid is the same as 6 zads.

How many zads are the same as one zod?

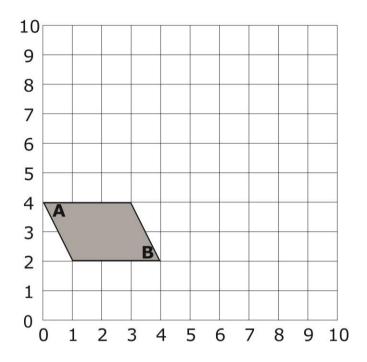
- **A** 9
- **B** 8
- **C** 7
- **D** 5
- E 12

Page 26

#### What is 0.54 as a fraction in its simplest form?

- A  $\frac{54}{10}$
- **B**  $\frac{27}{2}$
- $c \frac{27}{50}$
- $\frac{27}{5}$
- $\mathbf{E} \quad \frac{3}{7}$

Peter is going to redraw the parallelogram below but double the length of each side.



If Peter draws Vertex A of the new shape at (2, 8), what will be the coordinates of Vertex B?

- **A** (10, 4)
- **B** (4, 10)
- **C** (8, 4)
- **D** (10, 8)
- **E** (6, 6)

Sohee estimates the answer to  $428 \times 999$  by first rounding each number to the nearest hundred.

What is her final estimate?

- **A** 360 000
- **B** 3600000
- C 400 000
- **D** 4000000
- E 420 000

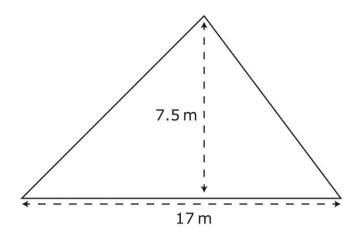
17

$$4.5 \times 1.28 = 5.76$$

What is 90 × 1280?

- **A** 57 600
- **B** 1152
- C 576 000
- **D** 1152000
- E 115 200

Todd makes a new canvas sail for his boat.



What is the area of the sail?

- **A** 60 m<sup>2</sup>
- **B** 59.50 m<sup>2</sup>
- C 199.00 m<sup>2</sup>
- **D** 127.50 m<sup>2</sup>
- **E** 63.75 m<sup>2</sup>

In a sale, the price of a T-shirt is reduced by 45%.

The sale price of the T-shirt is £20.90.

What was the original price of the T-shirt?

- A £38
- **B** £11.50
- C £45
- **D** £40.18
- **E** £40

20

The sum of three consecutive numbers is 9y.

What is the smallest of the three numbers in terms of y?

- **A** 3y 1
- **B** 3y + 1
- **C** 9y 3
- **D** 9y + 3
- **E** y + 9

END OF MATHEMATICS SECTION

DO NOT TURN OVER THE PAGE UNTIL YOU ARE TOLD TO DO SO.

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**END OF MATHEMATICS** 

## Non-Verbal Reasoning Subsection 1 Practice

(Untimed)

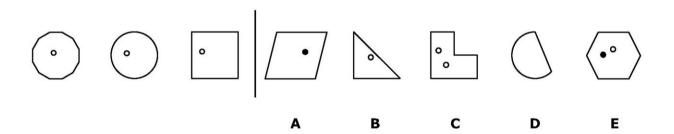
This practice section gives an example of the sort of question you will meet in Non-Verbal Reasoning Subsection 1 with the correct answer filled in on the answer sheet so that you can see how to do it.

There are also some practice questions which don't have the answers filled in so that you can practise working them out for yourself and filling in the answer sheet.

On the left of each of these questions, there are three figures that are alike.

Decide which of the five figures on the right is **most like** the three figures on the left and mark its letter on your answer sheet.

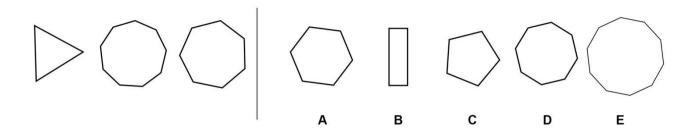




The three figures on the left each contain one small white circle. Therefore, the correct answer is **B**. This has been marked on your answer sheet.

Now try the practice questions and mark your answers on the answer sheet.

## Practice



## 2 Practice

#### **END OF PRACTICE**

Non-Verbal Reasoning Subsection 1 begins on the next page.

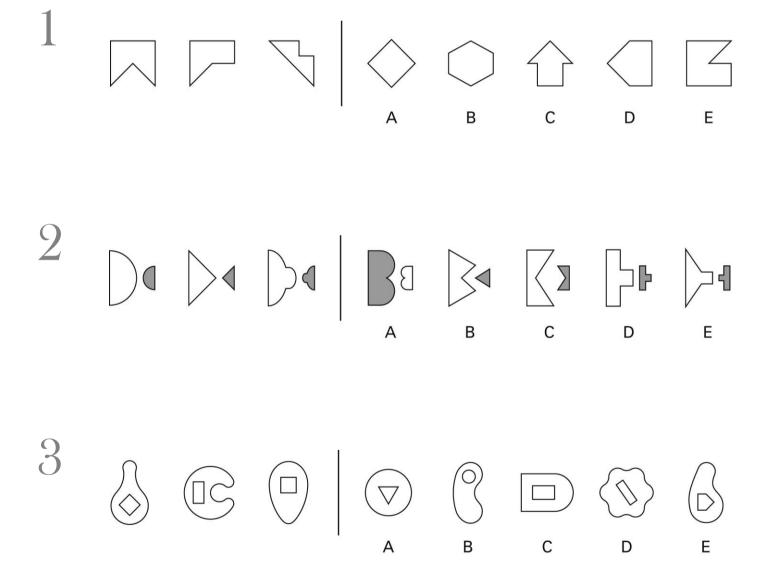
- You have 4 minutes to complete Non-Verbal Reasoning Subsection 1.
- There are 8 questions to answer.
- Your time will start when you turn over the page.
- Do not turn over the page until you are told to do so.

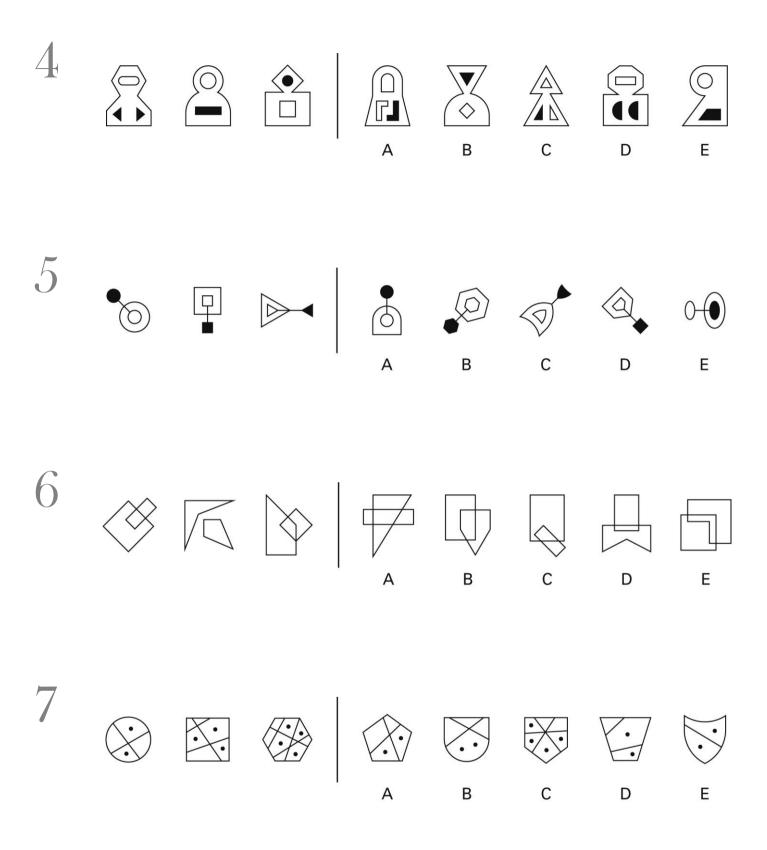
## Non-Verbal Reasoning Subsection 1

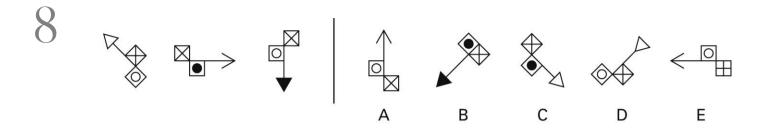
(4 minutes)

On the left of each of these questions, there are three figures that are alike.

Decide which of the five figures on the right is **most like** the three figures on the left and mark its letter on your answer sheet.







# END OF NON-VERBAL REASONING SUBSECTION 1 DO NOT TURN OVER THE PAGE UNTIL YOU ARE TOLD TO DO SO.

# Non-Verbal Reasoning Subsection 2 Practice

(Untimed)

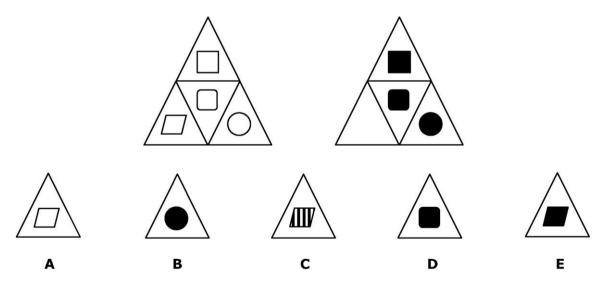
This practice section gives an example of the sort of question you will meet in Non-Verbal Reasoning Subsection 2 with the correct answer filled in on the answer sheet so that you can see how to do it.

There are also some practice questions which don't have the answers filled in so that you can practise working them out for yourself and filling in the answer sheet.

In each question, there are two large triangles, each made up of four small triangles. One of the small triangles has been left empty.

Decide which of the five figures should fill the empty triangle and mark its letter on your answer sheet.

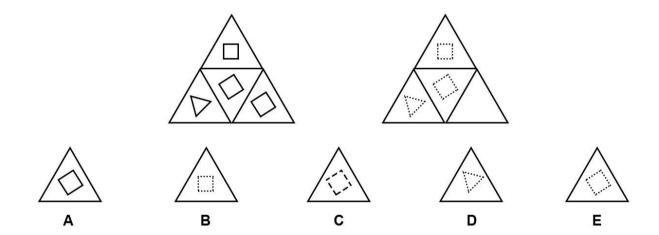
## ${f A}$ Example



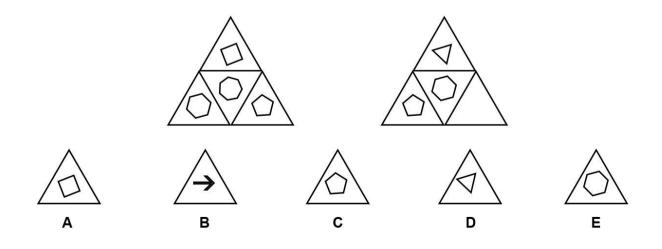
The shapes in the large triangle on the right are the same as the shapes in the large triangle on the left, except they are shaded black. Therefore, the answer is **E**. This has been marked on your answer sheet.

## Now try the practice questions and mark your answers on the answer sheet.

## Practice



## 2 Practice



#### **END OF PRACTICE**

Non-Verbal Reasoning Subsection 2 begins on the next page.

- You have 4 minutes to complete Non-Verbal Reasoning Subsection 2.
- There are 8 questions to answer.
- · Your time will start when you turn over the page.
- Do not turn over the page until you are told to do so.

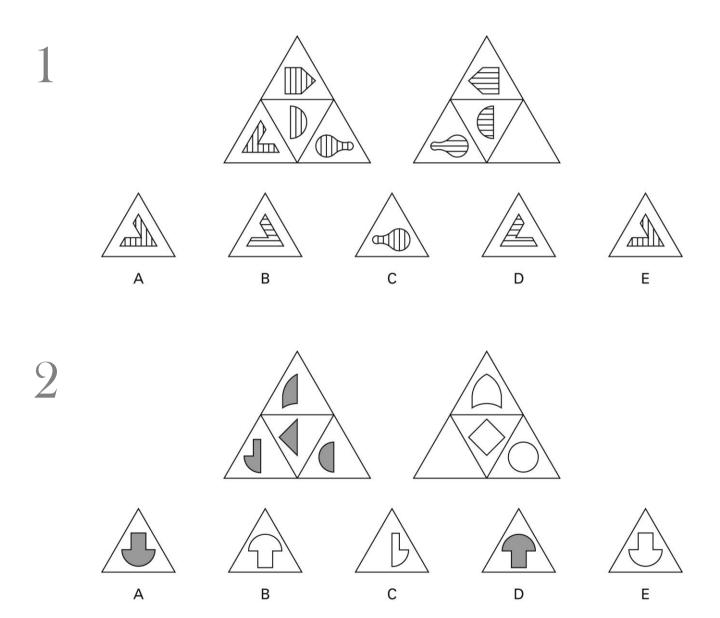
Page 39 END OF PRACTICE

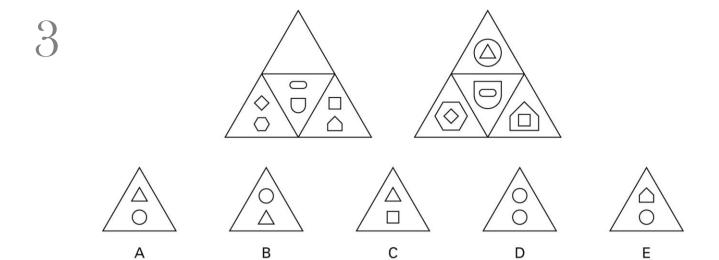
## **Non-Verbal Reasoning Subsection 2**

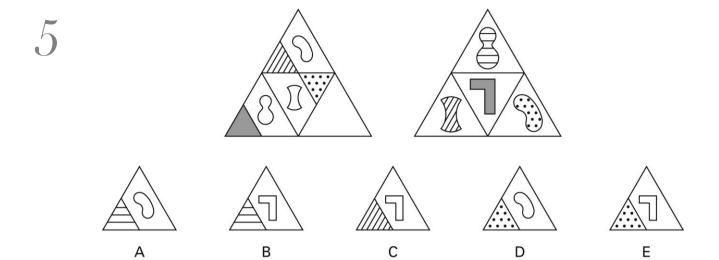
(4 minutes)

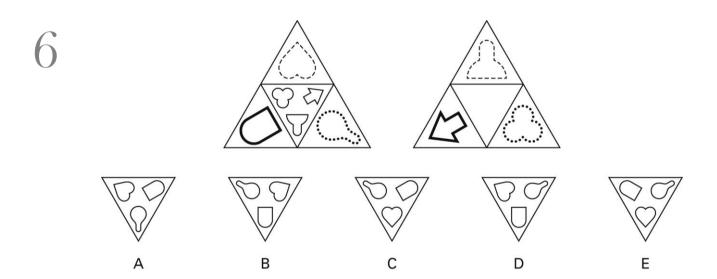
In each question, there are two large triangles, each made up of four small triangles. One of the small triangles has been left empty.

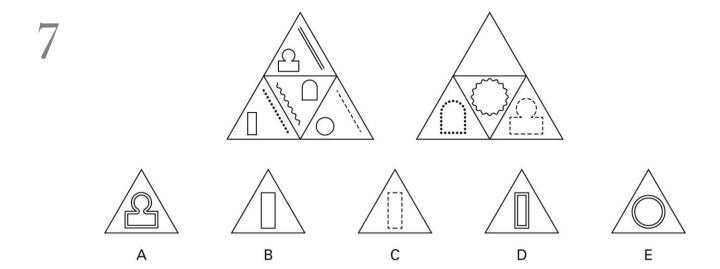
Decide which of the five figures should fill the empty triangle and mark its letter on your answer sheet.

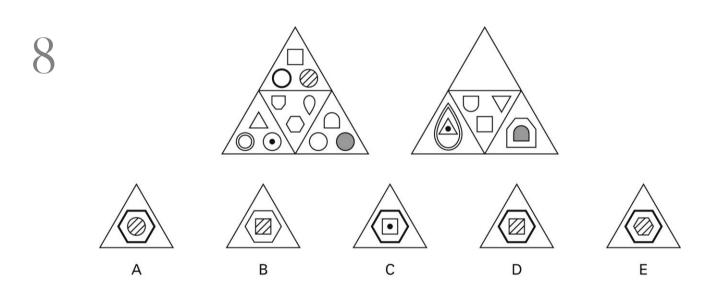












# END OF NON-VERBAL REASONING SUBSECTION 2 DO NOT TURN OVER THE PAGE UNTIL YOU ARE TOLD TO DO SO.

## Spatial Reasoning Practice

(Untimed)

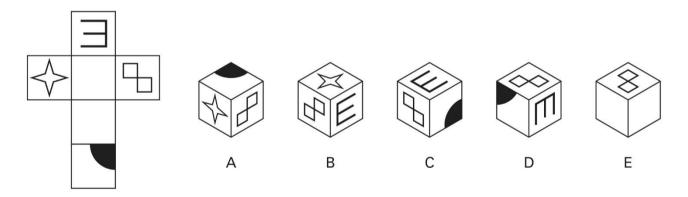
This practice section gives an example of the sort of question you will meet in the Spatial Reasoning section with the correct answer filled in on the answer sheet so that you can see how to do it.

There are also some practice questions which don't have the answers filled in so that you can practise working them out for yourself and filling in the answer sheet.

Decide which of the five cubes can be made from the net on the left and mark its letter on your answer sheet.

Only one option is correct.

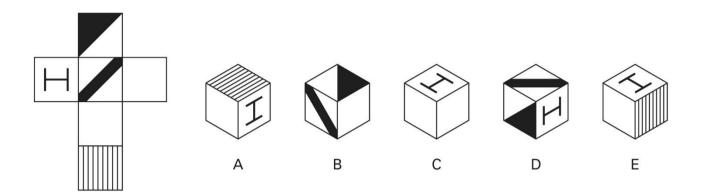




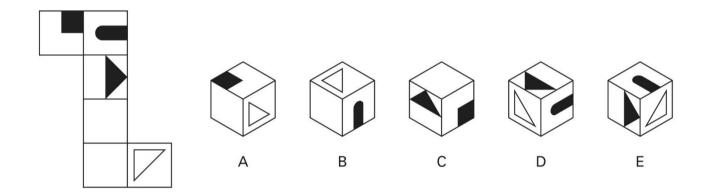
Options A and B can be ruled out, as faces that are separated by one square on the net are on opposite sides of the cube – they cannot be next to each other. Pay attention to the orientation of the different shapes and patterns and try to visualise how they will look when the net is folded into a cube. The correct answer is **D**. This has been marked on your answer sheet.

Now try the practice questions and mark your answers on the answer sheet.

## Practice



## 2 Practice



#### **END OF PRACTICE SECTION**

The Spatial Reasoning section begins on the next page.

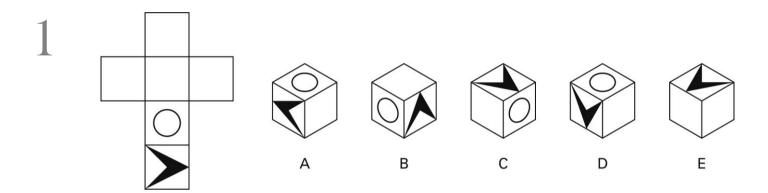
- You have 4 minutes to complete the Spatial Reasoning section.
- There are 8 questions to answer.
- Your time will start when you turn over the page.
- Do not turn over the page until you are told to do so.

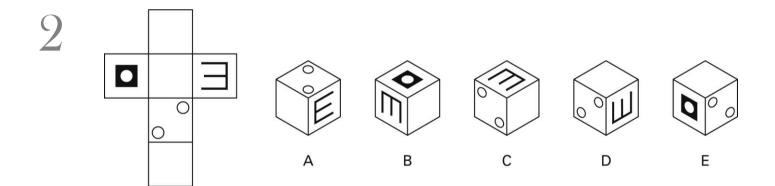
## **Spatial Reasoning**

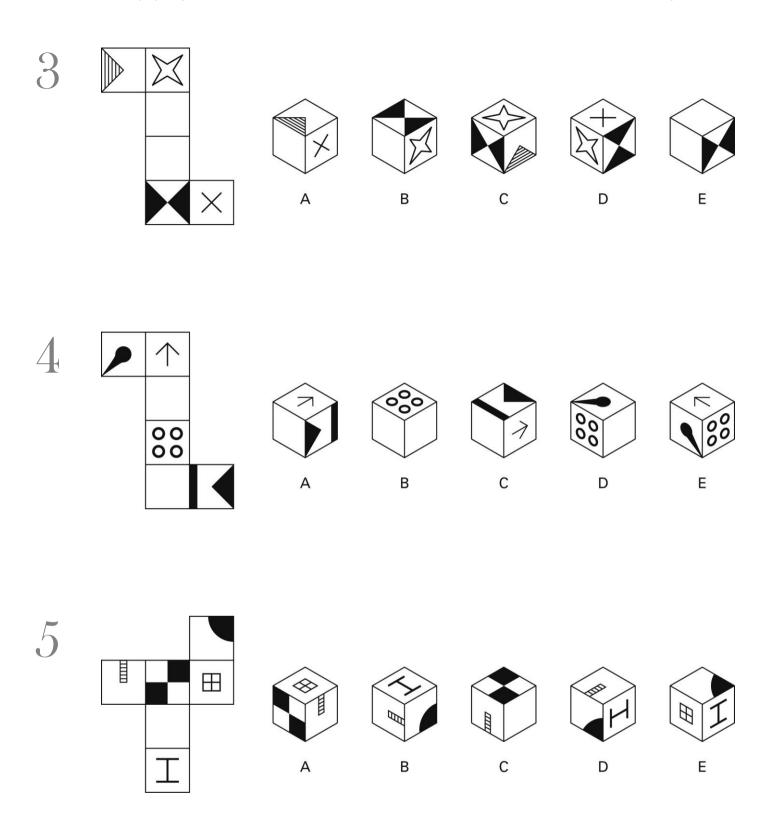
(4 minutes)

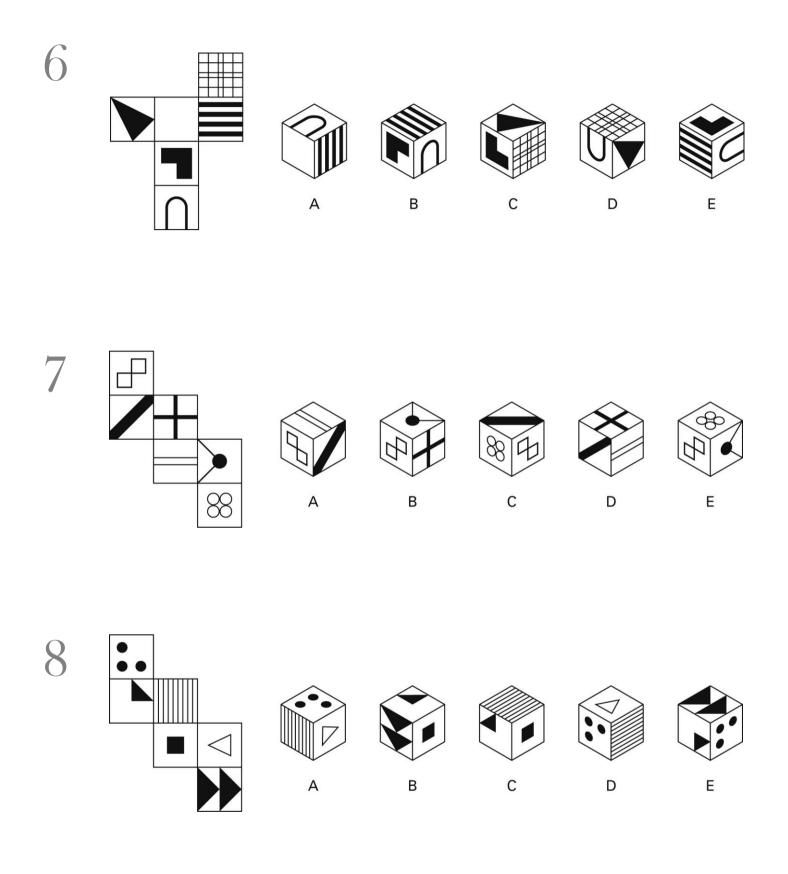
Decide which of the five cubes can be made from the net on the left and mark its letter on your answer sheet.

Only one option is correct.





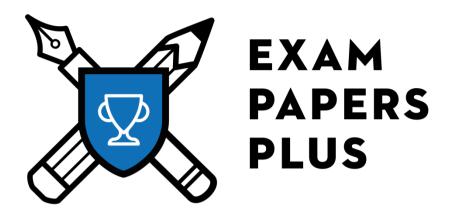




#### **END OF PAPER A**

Page 48

END OF SPATIAL REASONING



# 11+ Trafford Grammar Schools Consortium Practice Test 7

Paper B

60 minutes

66 marks

- This paper is divided into smaller, individually-timed sections that test Verbal Reasoning, Mathematics and Non-Verbal / Spatial Reasoning.
- The reasoning sections start with some untimed practice questions.
- All answers should be marked on the separate answer sheet provided.

Please turn over the page to begin the Verbal Reasoning Practice section.

#### **Verbal Reasoning Practice**

#### (untimed)

This practice section gives examples of the sort of questions you will meet in the Verbal Reasoning section with the correct answer filled in on the answer sheet so that you can see how to do it.

There are also some practice questions which don't have the answers filled in so that you can practise working them out for yourself and filling in the answer sheet.

In these questions, find **two** words, **one** from each group, that are **most opposite in meaning**.

Mark **both** words on the answer sheet.



#### **Example**

(kr	new new	known)	(th	ink	meet	old)
A	knew		X	thi	nk	
В	new		Y	me	et	
C	know		Z	old		

The two words, one from each group, that are **most opposite in meaning** are '**new**' from group one and '**old**' from group two. Both words have been marked on the answer sheet.

Now try the practice questions and mark your answers on the answer sheet. 1 Practice

(curve straight thick) (narrowing thin line)

A curve X narrowing

B straight Y thin

C thick Z line

Practice

(stop clock listen) (watch radio start)

A stop X watch

B clock Y radio

C listen Z start

In these questions, the three words in the second group should go together in the **same way** as the three in the first group.

Find the word that is missing in the second group and mark it on your answer sheet.

**P** Example

(pit [bit] dab) (far [?] sue)

A fur B ear C rue D use E era

The answer is **ear**. In the first group, the word '**bit**' is made from the last letter of 'da**b**' and the last two letters of 'p**it**'. In the same way, in the second group, the last letter of the word 'su**e**' and the last two letters of the word 'f**ar**' are put together to make the word '**ear**'. This has been marked on the answer sheet.

Now try the practice questions and mark your answers on the answer sheet.

O Practice

(war [now] ton) (pat [?] tin)

A tap B nip C pin D nap E tan

Practice

(pleas [tap] table) (tease [?] comfy)

A mat B yet C met D cot E fat

Page 4

Please go on to the next page >>>

#### **END OF PRACTICE**

The Verbal Reasoning section begins on the next page.

- You have 15 minutes to complete the Verbal Reasoning section.
- There are 22 questions to answer.
- · Your time will start when you turn over the page.
- Do not turn over the page until you are told to do so.

Page 5 END OF PRACTICE

#### **Verbal Reasoning**

(15 minutes)

Read this passage carefully, then answer the questions that follow.

#### War Doctor, by David Nott

Every now and then, at any time of day or night, we might hear the blaring of a car or pickup truck's horn in the distance, getting louder and louder as the vehicle sped towards us with its cargo of victims. The horns acted as a siren, and we'd know to get the emergency room ready so we could assess the patients and decide who needed to go straight into theatre. On one occasion the first patient to need our help turned out to be the wife of a local bomb-maker. At that time there were a lot of small factories opening up in Atmeh that were making explosives. These were fairly crude devices and few of the people making them knew what they were doing – they were mostly working at home, making it up as they went along, and putting their own families at terrible risk.

Please answer these questions. (Look at the passage again if you need to.)
You should choose the **best** answer and mark its letter on your answer sheet.

#### Why was the sound of car horns helpful to the narrator?

- A It helped to keep him awake.
- B It always woke him up.
- C It told him an ambulance was on its way.
- **D** It told him he needed to get ready to receive a patient.
- E It told him that war had broken out.

10

## What does the narrator mean by 'theatre'? (line 5)

- A a building designed for the performance of plays
- B a region in which a war or conflict takes place
- C the unfolding of dramatic events
- D a room where surgical operations are carried out
- E a improvised factory where bombs are made

# Which words are synonyms of 'crude'? (line 7) Choose TWO.

- 1 vulgar
- 2 makeshift
- 3 revolting
- 4 tricky
- 5 basic
- **A** 1 and 2
- **B** 2 and 4
- C 3 and 4
- **D** 1 and 5
- E 2 and 5

#### What does the word 'devices' refer to? (line 8)

- A small factories
- **B** bombs
- C bomb-makers
- D surgical equipment
- E sirens

In these questions, find **two** words, **one** from each group, that are **most opposite in meaning**.

Mark **both** words on the answer sheet.

(ample amble amoral) (stricken stride strenuous)

A ample X stricken

B amble Y stride

C amoral Z strenuous

(mellow meltdown melodious) (discordant draught dismiss)

A mellow X discordant

B meltdown Y draught

C melodious Z dismiss

(appraise appease apathy) (entice entangle enthusiasm)

A appraise X entice

B appease Y entangle

C apathy Z enthusiasm

(desist destitute dictate) (affluent affix afflict)

A desist X affluent

B destitute Y affix

C dictate Z afflict

(prevalent prevent precise) (unclasp uncommon uncivil) prevalent unclasp prevent uncommon uncivil precise (thrifty threadbare thrive) (infernal enrapt unused) **A** thrifty infernal threadbare enrapt thrive unused (unwise bland anguish) (sag saga sage) unwise A sag bland saga sage anguish (curtail current cursory) (extension extend extol) curtail extension current extend cursory Z extol

In these questions, the three words in the second group should go together in the **same way** as the three in the first group.

Find the word that is missing in the second group and mark it on your answer sheet.

(album [all] learn) (finer [?] patch)

	A fit B tan	C tin D tip	<b>E</b> fan
14	(tire [teen] even)	(well [?] amok)	
	A lame B woke	C wake D mall	<b>E</b> walk
1.5	(median [dive] arrive)	(strobe [?] modest)	
10	A rest B rode	C best D robe	E rose
16	(grime [tiger] metre)	(ogres [?] input)	
10	A prong B prone	C pores D prose	E purge

7 (sharp [rap] prime) (shaky [?] aware)

A key B was C way D war E yes

(water [mare] dream) (yacht [?] scale)

A late B eats C etch D each E chat

(strong [grit] grainy) (people [?] mourns)

A eels B mole C mope D mere E more

(whisper [pare] sharpen) (breathe [?] ethenyl)

A thee B then C they D neat E near

In a spelling competition, five students are listed in order of their final scores.

Lara is one place below Mara and two places above Zara.

Sara is one place below Lara.

Dara is one place above Zara.

Which two students finished on an equal score?

- A Mara and Dara
- **B** Dara and Sara
- C Zara and Sara
- **D** Dara and Lara
- E Sara and Mara

All darts players play snooker.

Some darts players play pool.

All snooker players play pool.

Some pool players play snooker.

If the above statements are all true, which one of the following statements MUST also be true?

- A Most pool players play snooker.
- **B** Some darts players like to warm up by playing snooker.
- C All darts players play pool.
- D All snooker players play darts.
- E Some people play darts, snooker and pool on the same evening.

END OF VERBAL REASONING SECTION

DO NOT TURN OVER THE PAGE UNTIL YOU ARE TOLD TO DO SO.

#### **Mathematics**

(20 minutes)

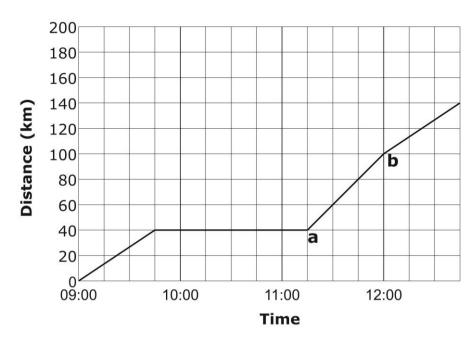
Work out the correct answer and mark its letter on the answer sheet.

What fraction is equivalent to 0.6?

- $\mathbf{A} \quad \frac{1}{3}$
- $\mathbf{B} \quad \frac{1}{2}$
- $c \frac{2}{3}$
- $\mathbf{D} \quad \frac{3}{5}$
- $\mathbf{E} = \frac{5}{6}$

Page 13

The graph shows the journey undertaken by Ted and Bill on day one of their road trip.

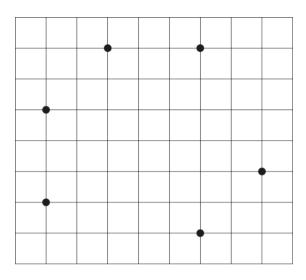


The fastest leg of their journey was between points **a** and **b**.

What was their speed in kilometres per hour during this part of their journey?

- **A** 60 km/h
- **B** 80 km/h
- C 100 km/h
- **D** 40 km/h
- E 120 km/h

Some dots are drawn on a unit grid.



Which of the following shapes CANNOT be made by joining some or all of the dots with straight lines?

- A irregular hexagon
- **B** irregular pentagon
- **C** rectangle
- D trapezium
- E All of these are possible.

Janie thinks of a three-dimensional shape.

She gives the following clues:

"My shape has five faces.

One of its vertices is shared by four faces."

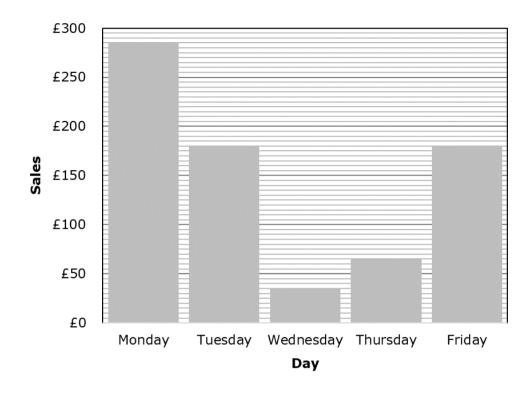
#### What shape is Janie thinking of?

- A square-based pyramid
- **B** triangular prism
- C pentagonal prism
- **D** cuboid
- E triangle-based pyramid

Page 16

Please go on to the next page >>>

The graph shows the sales made by an art shop over five days.



What were the mean daily sales for the shop over the five days?

- A £250
- **B** £180
- **C** £149
- **D** £224
- **E** £745

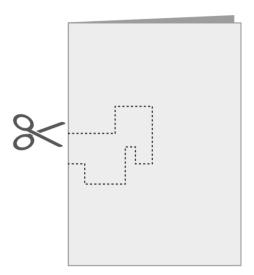
Page 17

## Which one of the following calculations has the highest value?

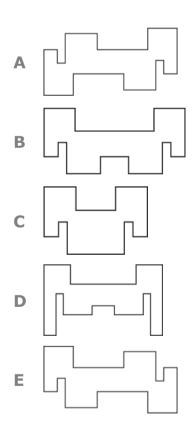
- **A** 30 × 100
- **B**  $0.3 \div 0.01$
- C 300  $\times$  10
- **D**  $0.03 \div 0.0001$
- **E**  $30 \div 0.001$

A piece of paper is folded in half.

The shape below is cut out of the folded paper.



Which one of the following shows what the shape will look like once it is unfolded?



Page 19

Please go on to the next page >>>

A triangle has angles X, Y and Z.

X is twice as big as Y, which is three times as big as Z.

#### What is the size of Angle Y?

- A 18°
- **B** 180°
- C 27°
- **D** 54°
- E 108°

9

The following formula is used to calculate a taxi fare:

Taxi fare = £5 + (50 p per minute) + (25 p per km)

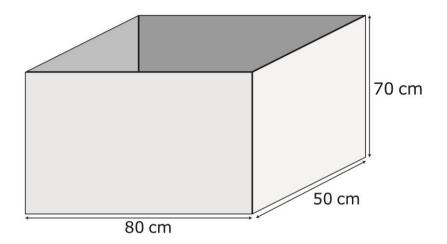
How long did a 10 km journey that cost £17.50 take?

- A 12.5 minutes
- **B** 10 minutes
- C 15 minutes
- D 20 minutes
- E 22.5 minutes

Page 20

The box below is to be filled with sand.

It takes 30 seconds to fill 100 cm<sup>3</sup> with sand.



#### How many minutes will it take to fill the box?

- A 2800 minutes
- **B** 2.8 minutes
- C 1400 minutes
- **D** 1.4 minutes
- E 3800 minutes

A number machine takes a number and doubles it, divides by three, multiplies by ten, subtracts five and then doubles once more.

What will be the result if the number 15 is put into the machine?

- **A** 190
- **B** 500
- **C** 50
- **D** 359
- **E** 390

## 12

#### Which one of the following statements is ALWAYS true?

- A An odd number multiplied by an even number gives an odd number.
- **B** Cubing a number gives a bigger result than squaring that number.
- C A negative number multiplied by a negative number gives a positive number.
- A positive number multiplied by a negative number gives a positive number.
- **E** An even number plus an odd number gives an even number.

Five people meet.

Each person shakes hands with each other person exactly once.

How many handshakes are there?

- A 4
- **B** 5
- **C** 6
- **D** 10
- E 15

14

Which one of the following is smallest?

- **A** 3.5%
- $\frac{1}{20}$
- $c \frac{2}{50}$
- **D** 0.04
- E 4%

A ferry departs from port with 82 passengers on it.

The ferry makes several stops on its journey.

At the first stop, 18 people get off and 24 get on.

At the second stop, 11 people get off and 41 get on.

How many people are on the ferry after the second stop?

- A 111
- **B** 118
- **C** 46
- **D** 35
- **E** 76

16

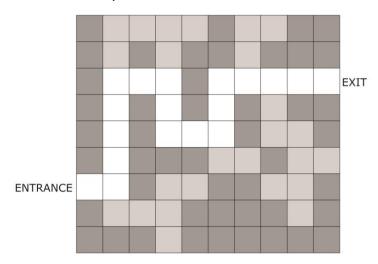
An isosceles triangle has two short sides that are 17z cm each. Its longest side is 3 times longer than its shortest side.

Which one of the following is an expression for the perimeter of the triangle in terms of z?

- **A** 51 cm
- **B** (51z + 34) cm
- C (34z + 51) cm
- **D** 51z cm
- **E** 85z cm

Page 24

The white squares show the direct route through a maze.



Which of the following offers correct instructions to navigate the maze by the direct route shown?

- A FORWARD 3, TURN LEFT, FORWARD 4, TURN RIGHT, FORWARD 3, TURN LEFT, FORWARD 3, TURN RIGHT, FORWARD 3, TURN RIGHT, FORWARD 3
- B FORWARD 2, TURN LEFT, FORWARD 4, TURN RIGHT, FORWARD 2, TURN RIGHT, FORWARD 2, TURN LEFT, FORWARD 2, TURN RIGHT, FORWARD 4
- C FORWARD 2, TURN RIGHT, FORWARD 4, TURN RIGHT, FORWARD 2, TURN RIGHT, FORWARD 3, TURN LEFT, FORWARD 2, TURN LEFT, FORWARD 3, TURN RIGHT, FORWARD 3
- FORWARD 3, TURN LEFT, FORWARD 4, TURN RIGHT, FORWARD 2, TURN RIGHT, FORWARD 3, TURN LEFT, FORWARD 2, TURN LEFT, FORWARD 2, TURN RIGHT, FORWARD 4
- FORWARD 2, TURN LEFT, FORWARD 4, TURN RIGHT, FORWARD 2, TURN RIGHT, FORWARD 3, TURN LEFT, FORWARD 2, TURN LEFT, FORWARD 2, TURN RIGHT, FORWARD 5

Page 25

The ratio of boys to girls in a swimming club is 3:7.

There are 18 boys in the club.

How many children are in the club in total?

- **A** 42
- **B** 60
- **C** 10
- **D** 36
- E 78

19

Lucy gets £2.86 pocket money each month.

Her cousin Jack gets twice as much.

If Jack saves his pocket money for a whole year, how much will he have?

- A £297,44
- **B** £158.72
- C £51.48
- **D** £17.16
- E £68.64

Page 26

Large bags of sweets weigh 450 g and small bags weigh half as much.

Marnie ate two large bags of sweets on Tuesday and three small bags of sweets on Wednesday.

Tim ate twice as many sweets as Marnie.

How many kilograms of sweets did Tim eat over the two days?

- **A** 0.1575 kg
- **B** 15.75 kg
- C 3.15 kg
- **D** 1.575 kg
- **E** 5.4 kg

# END OF MATHEMATICS SECTION DO NOT TURN OVER THE PAGE UNTIL YOU ARE TOLD TO DO SO.

# Non-Verbal Reasoning Subsection 1 Practice

(Untimed)

This practice section gives an example of the sort of question you will meet in Non-Verbal Reasoning Subsection 1 with the correct answer filled in on the answer sheet so that you can see how to do it.

There are also some practice questions which don't have the answers filled in so that you can practise working them out for yourself and filling in the answer sheet.

On the left of each question, there are some shapes and the code letters that go with them. Decide how the code letters go with the shapes and then work out the correct code for the test shape.

Find the correct code in the five options on the right and mark its letter on your answer sheet.



#### **Example**



TL



BH



**TEST SHAPE** 

TL BH

AL TH

)

AH

E



AL

The first letter of the code is different for each shape, so it is referring to the type of shape:  $\mathbf{T} = \text{circle}$ ,  $\mathbf{B} = \text{square}$  and  $\mathbf{A} = \text{triangle}$ .

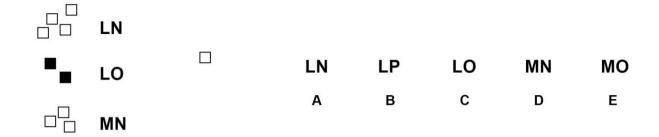
The second code letter is the same for the circle and triangle, so this is referring to the direction of the stripes:  $\mathbf{L} = \text{diagonal stripes}$  that move down from left to right and  $\mathbf{H} = \text{diagonal stripes}$  that move up from left to right.

The test shape is a circle with diagonal stripes that move up from left to right, so its code must be **TH**. Therefore, the answer is **D**. This has been marked on your answer sheet.

Now try the practice questions and mark your answers on the answer sheet.

Pra	ctice					
	AD					
	BE	AE	BF	AD	AF	BE
	AF	Α	В	С	D	E

# 2 Practice



#### **END OF PRACTICE**

Non-Verbal Reasoning Subsection 1 begins on the next page.

- You have 4 minutes to complete Non-Verbal Reasoning Subsection 1.
- There are 8 questions to answer.
- Your time will start when you turn over the page.
- Do not turn over the page until you are told to do so.

Page 30 END OF PRACTICE

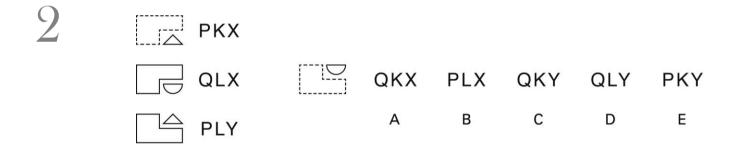
### Non-Verbal Reasoning Subsection 1

(4 minutes)

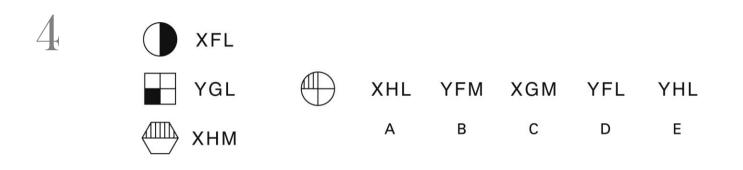
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Find the correct code in the five options on the right and mark its letter on your answer sheet.

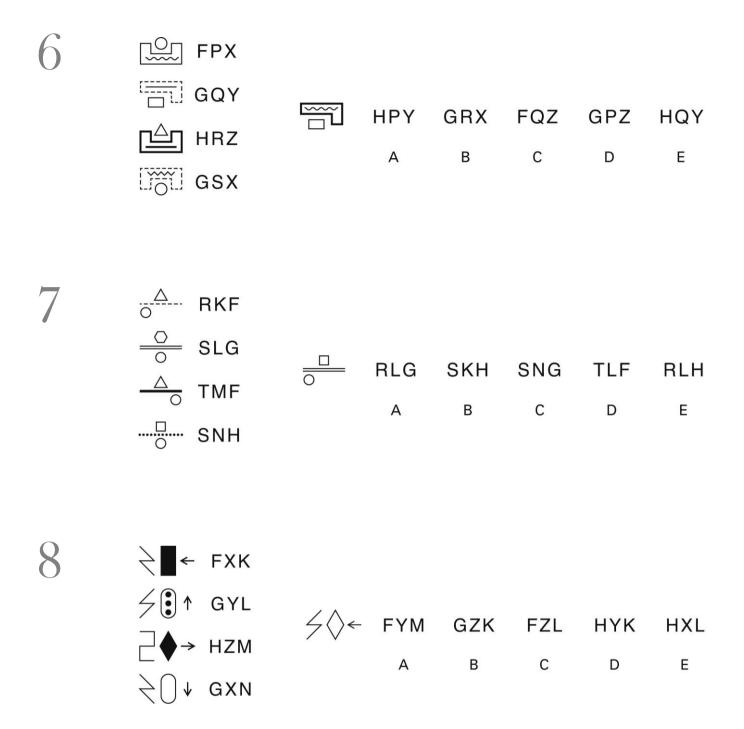
1	RLF					
	<u></u> SMG	RMG	SLG	TLF	RMF	TMF
	TLG	Α	В	С	D	Е











# END OF NON-VERBAL REASONING SUBSECTION 1 DO NOT TURN OVER THE PAGE UNTIL YOU ARE TOLD TO DO SO.

# Non-Verbal Reasoning Subsection 2 Practice

(Untimed)

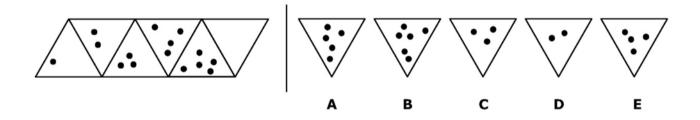
This practice section gives an example of the sort of question you will meet in Non-Verbal Reasoning Subsection 2 with the correct answer filled in on the answer sheet so that you can see how to do it.

There are also some practice questions which don't have the answers filled in so that you can practise working them out for yourself and filling in the answer sheet.

On the left of each question, there are five triangles arranged in order. One of these triangles has been left empty.

Decide which of the five triangles on the right should take the place of the empty triangle and mark its letter on your answer sheet.

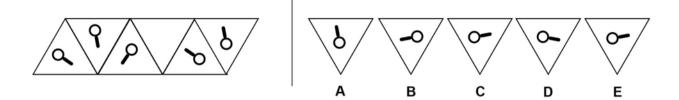




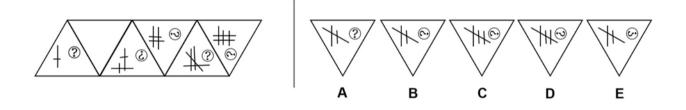
Each triangle contains one more black circle than the triangle to its left. Therefore, the answer is **B**. This has been marked on your answer sheet.

Now try the practice questions and mark your answers on the answer sheet.

### Practice



# 2 Practice



#### **END OF PRACTICE**

Non-Verbal Reasoning Subsection 2 begins on the next page.

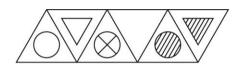
- You have 4 minutes to complete Non-Verbal Reasoning Subsection 2.
- There are 8 questions to answer.
- Your time will start when you turn over the page.
- Do not turn over the page until you are told to do so.

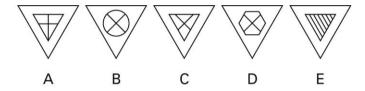
## **Non-Verbal Reasoning Subsection 2**

(4 minutes)

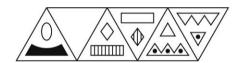
On the left of each question, there are five triangles arranged in order. One of these triangles has been left empty.

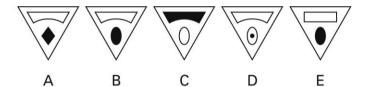
Decide which of the five triangles on the right should take the place of the empty triangle and mark its letter on your answer sheet.



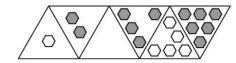


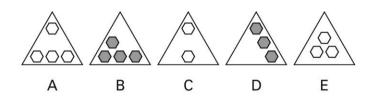
2



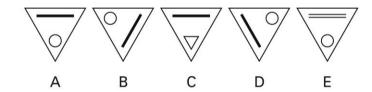






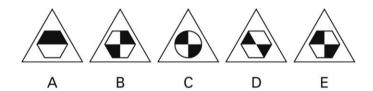


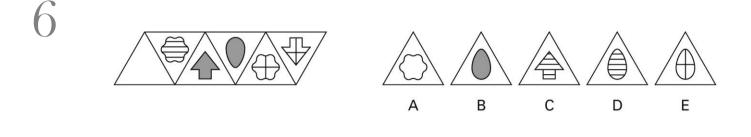


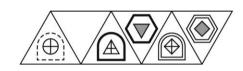


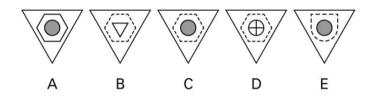
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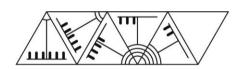


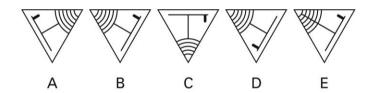






8





END OF NON-VERBAL REASONING SUBSECTION 2
DO NOT TURN OVER THE PAGE UNTIL YOU ARE TOLD TO DO SO.

# Spatial Reasoning Practice

(Untimed)

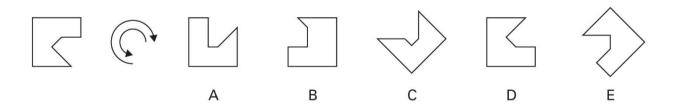
This practice section gives an example of the sort of question you will meet in the Spatial Reasoning section with the correct answer filled in on the answer sheet so that you can see how to do it.

There are also some practice questions which don't have the answers filled in so that you can practise working them out for yourself and filling in the answer sheet.

In these questions, one of the shapes on the right is exactly the same as the target shape on the left, but it has been rotated (spun round) into a different position.

Choose which of the five shapes on the right matches the target shape and mark its letter on your answer sheet.

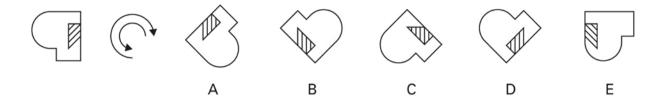




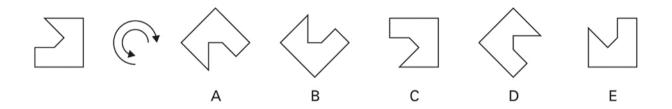
Look at the features of the target shape on the far left and study how they relate to each other. You can then look for the same features on the five shapes on the right. Although shape D is the right shape, it is a reflection of the target shape and not a rotation. The correct answer is **E**. This has been marked on your answer sheet.

Now try the practice questions and mark your answers on the answer sheet.

## Practice



# 2 Practice



#### **END OF PRACTICE**

The Spatial Reasoning section begins on the next page.

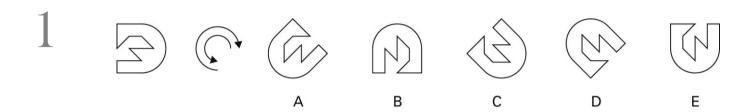
- You have 4 minutes to complete the Spatial Reasoning section.
- There are 8 questions to answer.
- Your time will start when you turn over the page.
- Do not turn over the page until you are told to do so.

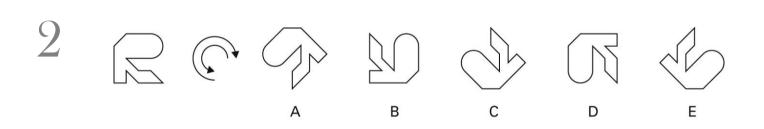
### **Spatial Reasoning**

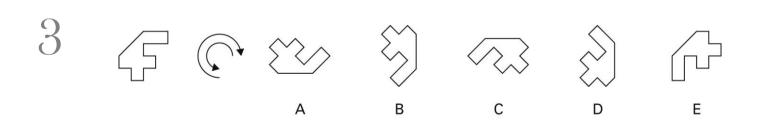
(5 minutes)

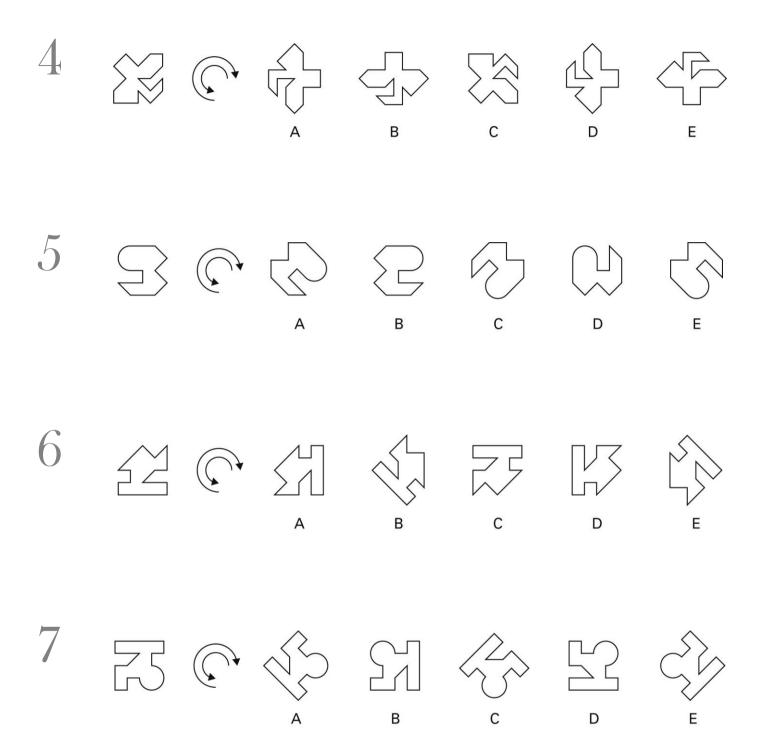
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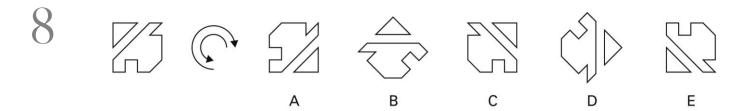
Choose which of the five shapes on the right matches the target shape and mark its letter on your answer sheet.



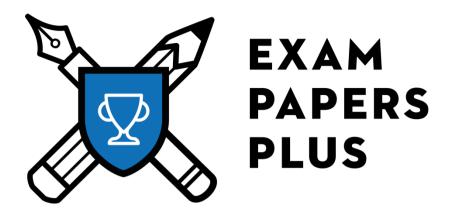








#### **END OF PAPER B**



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### **Practice Test 7**

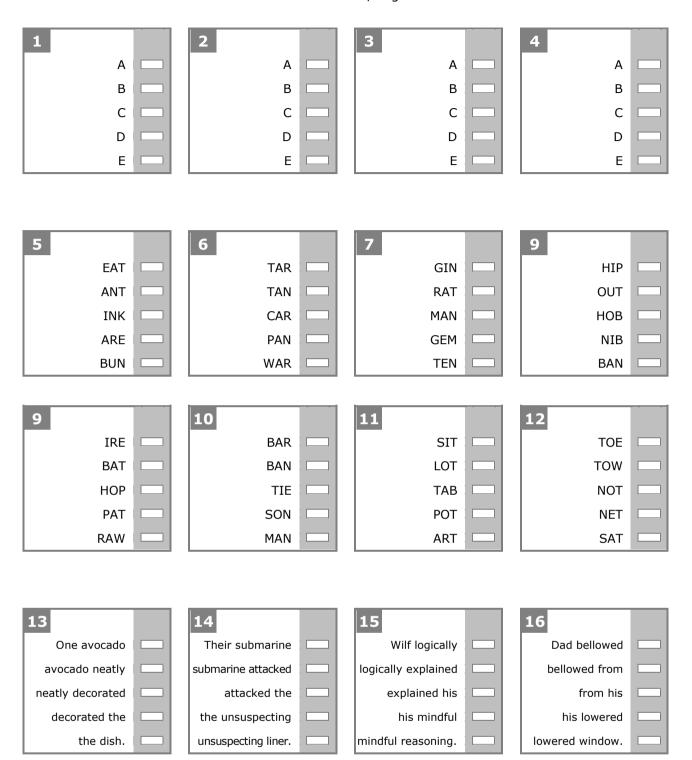
Paper A
Answer Sheets

#### **Answer Sheets**

Please mark boxes with a thin horizontal line like this  $\longrightarrow$ .

### **Verbal Reasoning**

				_		
A Example		1	Practice		2 Practice	
A			А		А	
В			В		В	
С			С		С	
D	$\blacksquare$		D		D	
E			E		E	
B Example		3	Practice		4 Practice	
LAD			EAR		RAN	
PIN			ORE		BAN	
LID			ARE		CAN	
NOT			ONE		TON	
FUN			IRE		PAN	
C Example		5	Practice		6 Practice	
My scar			Police secretly		Her baby	
scar took		se	ecretly followed		baby girl	
took weeks			followed the		girl always	
weeks to			the green		always looks	
to fade.			green vehicle.		looks content.	



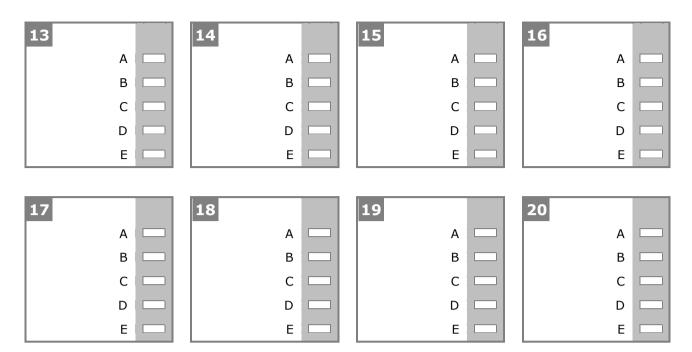
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17		18		19		20	
Our guru		Carrie needs		Grandad ripped		I have	
guru delivered		needs to		ripped his		have one	
delivered an		to consult		his favourite		one muffin	
an amazing		consult her		favourite trousers		muffin every	
amazing speech.		her barrister.		trousers today.		every day.	

#### **END OF VERBAL REASONING SECTION**

#### **Mathematics**

A Example	1 Practice	2 Practice	
A	A	A .	
В	В	В	
c 🖂	С	С	
D 🗀	D	D .	
E =	E 🗀	E	
1	2	3	4
A	A	A .	A
В	В	В	В
С	С	С	c 🗀
D 🗀	D	D .	D 🗀
E	E 🗀	E	E 🗀
5	6	7	8
A 🗀	A :	A	A 🗀
В	В	В	В
C	С	C C	c 🗀
D	D	D .	D -
E	E	E	E 🗀
9	10	11	12
A	Α 🗀	A	A
В	В	В	В
С	С	С	c 🗀
D	D	D .	D
E -	E	E .	E 🖂



#### **END OF MATHEMATICS SECTION**

# Non-Verbal Reasoning Subsection 1

A Example	1 Practice	2 Practice	
A	A	A	
В	В	В	
С	С	c 🖂	
D	D .	D	
E .	E	E	
1	2	3	4
A	A :	A .	A
В	В	В	В
C 🗀	С	C 🗀	C
D 🗀	D	D	D 🗀
E -	E : -	E	E 🗀
5	6	7	8
A	A :	A .	A
В	В	В	В
C	C	С	c 🗀
D .	D .	D	D
E .	E	E	E 🖂

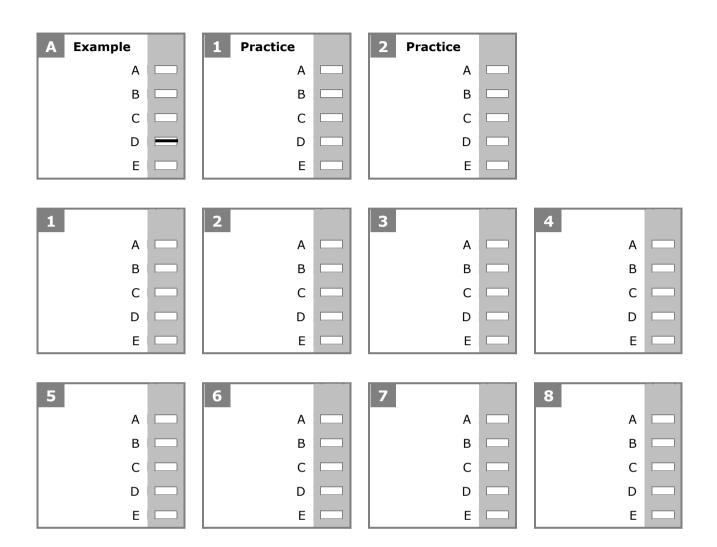
#### **END OF NON-VERBAL REASONING SUBSECTION 1**

# Non-Verbal Reasoning Subsection 2

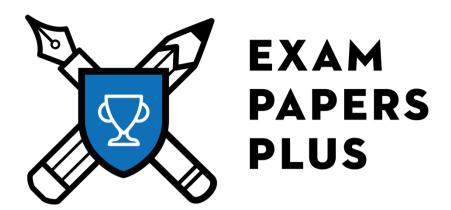
A Example	1 Practice	2 Practice	
A	A	A	
В	В	В	
c 🗀	С	c 🗀	
D 🗀	D	D	
E =	E	E 🖂	
1	2	3	4
A	A	A	A
В	В	В	В
c 🖂	С	С	c 🖂
D	D	D D	D
E -	E	E -	E -
-		-	
5	6	7	8
A	A	A	A
В	В	В	В
c 🖂	С	С	c 🖂
D	D	D	D 🖂
E	E	E	E 🖂

#### **END OF NON-VERBAL REASONING SUBSECTION 2**

## **Spatial Reasoning**



#### **END OF SPATIAL REASONING**



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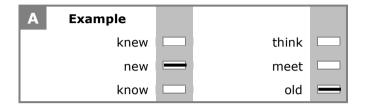
### **Practice Test 7**

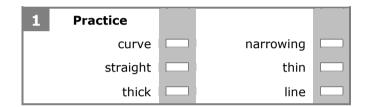
Paper B
Answer Sheets

#### **Answer Sheets**

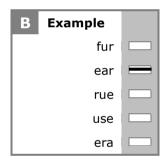
Please mark boxes with a thin horizontal line like this  $\longrightarrow$ .

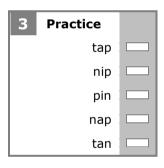
### **Verbal Reasoning**

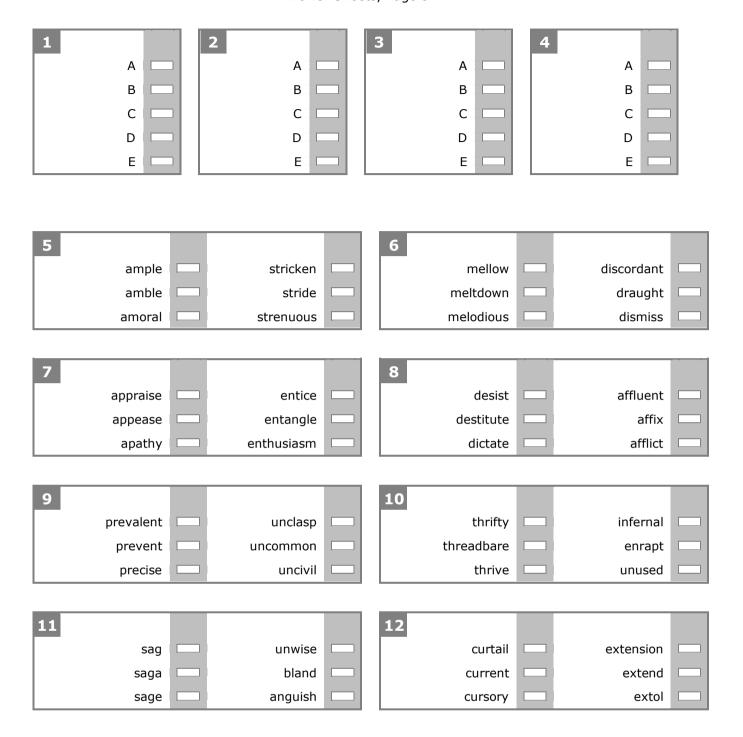


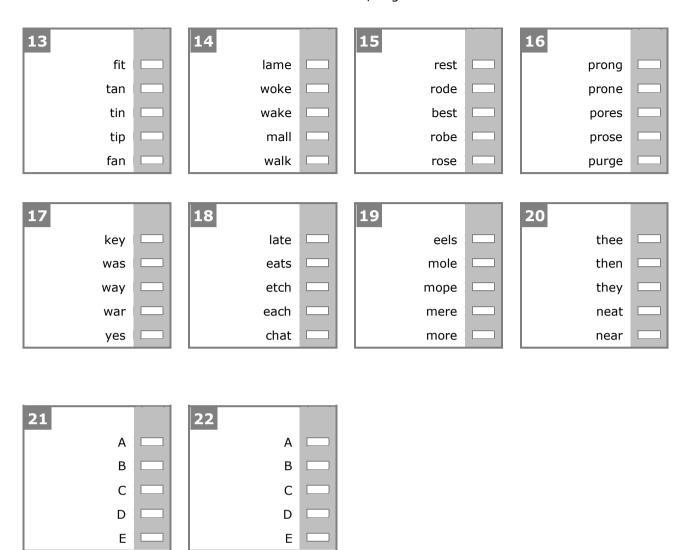


2	Practice		
	stop	watch	
	clock	radio	
	listen	start	









#### **END OF VERBAL REASONING SECTION**

#### **Mathematics**

1	A	2	A	3	A	4	A
5	A	6	A	7	A	8	A
9		10		11		12	
	A		A B C D C D C C C C C C C C C C C C C C C		A		A

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17	18	19	20
A	A	A	A
В	В	В	В
C	c 🖂	C	c 🖂
D	D 🗀	D	D 🗀
E 🗀	E	E 🗀	E

#### **END OF MATHEMATICS SECTION**

# Non-Verbal Reasoning Subsection 1

				*		
A Example	1 Practice	2	Practice			
A 🗀	Α Α		A			
В	В		В			
С			C			
D =	D		D			
E	E		EIC			
1	2	3		4		
A 🗆	ΑΑ		A		Α	
В	В		В		В	
С	С С		С		С	
D $\square$	D		DI		D	
E	E		E		Е	
5	6	7		8	3	
A 🗀	ΑΑ		A		Α	
В	В		В		В	
С	С		C		С	
D $\square$	D		D		D	
E	E		E		Е	

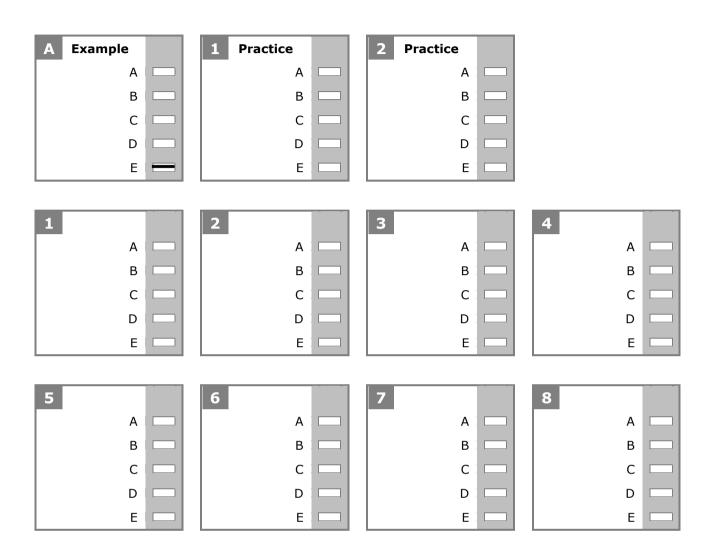
#### **END OF NON-VERBAL REASONING SUBSECTION 1**

# Non-Verbal Reasoning Subsection 2

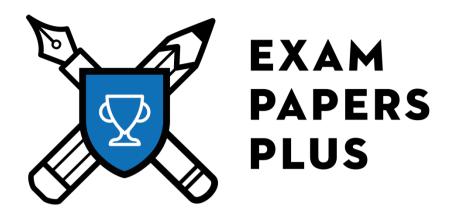
A Example	1 Practice	2 Practice	
A	A	A	
В	В	В	
С	С	C .	
D	D	D .	
E -	E	E	
1	2	2	4
_	2	3	4
A	A	A .	A
В	В	В	В
С	С	С	c 🖂
D .	D	D .	D
E	E	E	E -
5	6	7	8
A	A	A :	A 🗀
В	В	В	В
c 🖂	С	С	c 🖂
D 🖂	D	D .	D 🗀
E -	E -	E	E 🗀

# **END OF NON-VERBAL REASONING SUBSECTION 2**

# **Spatial Reasoning**



#### **END OF SPATIAL REASONING**



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**Practice Test 7** 

Paper A Answers

# **Verbal Reasoning**

#### **Practice Section**

- 1 E
- 2 A
- **3 ARE** (PARENTS)
- 4 RAN (RESTAURANT)
- **5 Police secretly** (The hidden word is 'ices'.)
- **6 Her baby** (The hidden word is 'herb'.)

# **Test**

#### 1 A

The narrator tells the reader that being a "meeter" gives him time to mentally prepare ('clear the mind', line 5) for his next patient; put his patients at ease (line 7); connect with his patient ('rapport-building', line 9); and detect certain conditions ('back pain is instantly recognisable from the way someone gets out of their chair', lines 12–13). There is no mention of going outside to get some fresh air.

#### 2 E

The narrator uses the word 'distinct' to show that GPs can be put into one of two *separate* and *different* groups.

#### 3 B

'Small talk' is polite conversation about unimportant (*small*) things, such as the weather.

#### 4 E

The narrator tells the reader that small talk in the corridor is 'rapport-building' (line 9) – it helps to relax the patient and ease them into conversation, so that they are ready to discuss more important matters when they get to the consulting room. A patient who has not had this opportunity, would arrive at his door "cold".

#### 5 INK

The cream is supposed to get rid of WRINKLES.

#### 6 TAR

The prisoner was placed in SOLITARY confinement.

#### 7 GEM

My sister will announce her ENGAGEMENT at the party.

#### 8 HOB

My father is a TECHNOPHOBE.

#### 9 BAT

Dan plans to join the DEBATING society at university.

#### **10 MAN**

My brother DISMANTLED his radio to see how it worked.

#### **11 POT**

Leo loves to be in the SPOTLIGHT.

#### **12 TOE**

The POTATOES are delicious and crispy.

# 13 avocado neatly

The hidden word is **done**.

## 14 submarine attacked

The hidden word is **neat**.

# **15** Wil**f log**ically

The hidden word is **flog**.

# 16 his lowered

The hidden word is **slow**.

# **17** gu**ru de**livered

The hidden word is **rude**.

#### 18 her barrister

The hidden word is **herb**.

# 19 Grandad ripped

The hidden word is **drip**.

# **20** muf**fin e**very

The hidden word is **fine**.

# **Mathematics**

# **Practice Section**

- 1 C
- 2 A

# **Test**

**1 C** Point A is at (7, 6).

Reflecting in the x-axis changes the sign of the y-coordinate from + to -.

Reflecting in the y-axis changes the sign of the x-coordinate from + to -.

[Position and Direction]

**2 C** £0.22 × 12 = £2.64

$$£5.00 - £2.64 = £2.36$$

The fewest coins that can be used to make this are:

£2 + 
$$20p + 10p + 5p + 1p$$

That's five coins.

[Money]

**3 E** There are 4 dials and each dial has 10 digits on it.

Therefore, the total number of different possible combinations is  $10 \times 10 \times 10 \times 10 = 10000$ .

[Algebra]

**B** If the length is twice the width, then the perimeter can be considered six widths added together.

$$66 \, \text{m} \div 6 = 11 \, \text{m}$$

[Perimeter, Area and Volume]

**5 C**  $3 \times 12$  litres = 36 litres

$$36 \times 1000 = 36000 \,\text{ml}$$

$$36\,000 \div 60 = 3600 \div 6$$

$$3600 \div 6 = 100 \times (36 \div 6) = 600$$
 eggcups

[Measurements]

**6 A** The left clock shows 8.35

The right clock shows 4.08

The difference between 8.35 and 4.08 is 7 hours 33 minutes.

(Of course it could be bigger if the clock has made more revolutions, but none of the given options is large enough for this.)

Remember to subtract 2 hours for the time difference.

[Measurements]

**7** A Compare the digits in the tenths place, then the digits in the hundredths place, then the digits in the thousandths place, and so on.

[Estimation and Place Value]

**8 D** The whole pie is 360°.

$$\frac{72}{360}$$
 = 0.2 or one-fifth of the total.

So, one-fifth of 250 students chose chess, which is

$$250 \div 5 = 50$$
.

Which means  $50 \div 10 = 5$  students chose hockey.

62% of 250 is 155, so 155 students chose football or gaming.

$$50 + 5 + 155 = 210$$

Which leaves 40 for the remaining two equal segments: swimming and painting.

So, 20 students voted for each of these.

[Statistics]

**9 A** Divide by eight and multiply by five.

[Ratio and Proportion; Money]

**10 C** Parallel means moving in the same direction (so cannot touch).

Perpendicular means at a right angle (but they do not need to touch to be perpendicular).

[Properties of Shapes]

**11 E** From the graph, the price for 250 g in 2023 is 232 p.

The price in 2016 was 136 p.

The difference is 96 p.

So, the difference for 1 kg is  $96 p \times 4 = 384 p = £3.84$ .

[Statistics; Money]

**12 C** A decagon has 10 sides.

$$360^{\circ} \div 10 = 36^{\circ}$$

$$180^{\circ} - 36^{\circ} = 144^{\circ}$$

[Angles and Degrees; Properties of Shapes]

**13 A** 2 zods = 3 zids

$$1 zid = 6 zads$$

$$2 zods = 3 \times 6 = 18 zads$$

$$1 \text{ zod} = 18 \div 2 = 9 \text{ zads}$$

[Algebra]

**14 C**  $0.54 = \frac{54}{100} = \frac{27}{50}$ 

[Fractions, Decimals and Percentages]

**15 A** Currently, B is two down and four right from A.

When Pete doubles the side lengths, this will double in each direction.

So, B will now be four down and eight right from A.

A has coordinates (2, 8).

New x-coordinate of B = 2 + 8 = 10

New y-coordinate of B = 8 - 4 = 4

So, B will be at (10, 4).

[Position and Direction]

**16 C**  $400 \times 1000 = 400000$ 

[Estimation and Place Value]

**17 E** If they give you a calculation, it is for a reason!

$$90 = 4.5 \times 2 \times 10$$

So, 
$$90 = 4.5 \times 20$$

$$1280 = 1.28 \times 1000$$

So, you can use the original answer and multiply it by 20 and then by 1000 to find the new answer.

This is the same as doubling and then multiplying by 10 000.

[Operations]

**18 E** The area of a triangle is a half base  $\times$  height.

$$7.5 \times 17 = 127.5$$

$$127.5 \div 2 = 63.75 \,\mathrm{m}^2$$

[Perimeter, Area and Volume]

**19 A** If the price has gone down by 45%, the sale price is 55% of the original price.

$$55\% = \frac{55}{100} = \frac{11}{20}$$

£20.90 
$$\div$$
 11  $\times$  20 = £38

[Fractions, Decimals and Percentages]

**20 A** If the numbers were not consecutive but were instead equal, you could find one of them by dividing the total by three.

For example, say the total was 30:

When the numbers are consecutive and differ by one, the middle number stays the same:

So to find the first number, divide by three and subtract one:

$$9y \div 3 = 3y$$

$$3y - 1$$

[Algebra]

# Non-Verbal Reasoning Subsection 1

# **Practice Section**

- **1 C** (The shapes on the left all have an odd number of sides.)
- **2 E** (The figures on the left are all rotations of the same shape.)

#### **Test**

1 D

The shapes on the left all have five sides.

2 C

Each figure on the left is made up of a large white shape and a small, grey reflected version of the same shape.

3 D

Each figure on the left is made up of a small four-sided shape inside a larger shape that has curved sides only.

4 B

Each figure on the left has one line of vertical symmetry.

5 B

Each figure on the left contains two identical small shapes, one inside an identical large shape and one outside, joined by a solid line. The outer small shape is shaded black.

6

Each figure on the left consists of two four-sided shapes.

7 A

In each figure on the left, the number of internal lines equals the number of black dots. Each line crosses at least one other line and there is no more than one dot in each section.

8

Each figure on the left has the same configuration of squares and arrow. The arrowhead always points away from the squares. One square has a cross fill and the other has a black or white circle.

# Non-Verbal Reasoning Subsection 2

#### **Practice Section**

- **1 E** (From left to right, the outline of each shape changes to dotted.)
- **2 A** (From left to right, there is one less side on each shape.)

### **Test**

#### 1 B

From left to right, the shapes are reflected in the vertical and the striped shading rotates 90°.

#### 2 E

From left to right, each shape reflects across the vertical to form one large symmetrical shape, and the shading changes from grey to white.

#### 3 A

From left to right, the lower shape in each small triangle enlarges and the upper shape moves inside it.

#### 4 B

From left to right, each shape splits into three parts. The position of the black circle in the first matrix determines which third of each shape is shaded black in the second matrix.

#### 5 B

From left to right, the shapes move one position clockwise around the matrix (spiralling inward) and enlarge. The shading of the triangles in the first matrix determines the shading of the next shape anticlockwise.

#### 6 C

The small shapes inside the central triangle of each matrix reflect out to the opposite triangle in the opposite matrix (the different line styles are a distractor).

## 7 D

From left to right, the shapes move clockwise around the matrix (spiralling inward), enlarge and take the line style from the line in the triangle that corresponds with its new position.

#### 8 D

The small shapes in the centre triangle of the left-side matrix rotate 180°, enlarge and go to the opposite outside triangle in the right matrix. These large shapes take their line style from the lower left circle in the triangles in the left matrix. The small upper shapes in the left matrix then move into these enlarged shapes, taking their shading from the lower right circle.

# **Spatial Reasoning**

# **Practice Section**

- 1 A
- 2 E

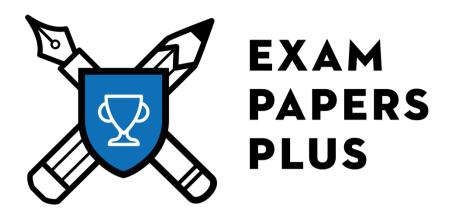
## **Test**

Try to visualise what the cube will look like when folded up.

Remember, faces that are separated by one square on the net will be on opposite sides of the cube – they cannot be next to each other.

Pay attention to the orientation of the different shapes in relation to each other and think about how they will rotate when the net folds.

- 1 B
- 2 D
- 3 C
- 4 A
- 5 E
- 6 D
- 7 B
- 8 E



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**Practice Test 7** 

Paper B Answers

# **Verbal Reasoning**

#### **Practice Section**

- thick and thin
- 2 stop and start
- 3 nip
- 4 cot

#### Test

#### 1 D

'The horns acted as a siren, and we'd know to get the emergency room ready so we could assess the patients' (lines 3–5).

### 2 D

The reference to the 'theatre' follows on immediately from the line above, so we can infer that it is a surgical theatre where operations will be carried out on patients who require them.

#### 3 E

In this context the word 'crude' means *basic* and *makeshift* – the bomb makers had no technical knowhow and no real resources, so they had to improvise.

#### 4 B

The word 'devices' refers back to the explosives, i.e. the bombs, mentioned at the end of the previous line.

#### 5 amble and stride

To *amble* is to walk slowly and in a relaxed manner; to *stride* is to walk with quick, long steps.

# 6 melodious and discordant

A *melodious* sound is pleasant to listen to; a *discordant* sound is unpleasant to hear.

# 7 apathy and enthusiasm

Apathy is a lack of interest or enthusiasm; enthusiasm is a keen interest or eagerness.

#### 8 destitute and affluent

Someone who is *destitute* has no money or possessions; someone who is *affluent* has lots of money.

# 9 prevalent and uncommon

Something that is *prevalent* is widespread or common; something that is *uncommon* is rare or unusual.

#### 10 threadbare and unused

Something that is *threadbare* is frayed or worn because it has been used a great deal; something that is *unused* has not been used at all.

#### 11 sage and unwise

The adjective *sage* means wise or prudent; the adjective *unwise* means lacking wisdom or prudence (foolish).

#### 12 curtail and extend

The verb *curtail* means to cut short; the verb *extend* means to draw out or lengthen.

# 13 tip

Look at the first set of words.

Number the letters in 'album' and 'learn' from 1-10.

The word in square brackets, 'all', is made from letters 1/8, 2/6 and 2/6.

Number the letters in 'finer' and patch' in the same way.

The letters 1/8, 2/6 and 2/6 give you f/t, i/p, i/p.

Looking at the answer options, the answer must be 'tip'.

#### 14 walk

Using the same method as for Q11.

The word 'teen' is made from letters 1, 4/5/7, 4/5/7 and 8 of 'tire' and 'even'.

Applied to the second set of words, this gives you w, I/a/o, I/a/o, k.

Looking at the answer options, the answer must be 'walk'.

#### 15 rest

Using the same method as for Q11.

The word 'dive' is made from letters 3, 4/10, 11 and 2/12 of 'median' and 'arrive'.

Applied to the second set of words, this gives you r, o/e, s, t.

So, the answer must be 'rest'.

#### 16 prong

Using the same method as for Q11.

The word 'tiger' is made from letters 8, 3, 1, 5/7/10 and 2/9 of 'grime' and 'metre'.

Applied to the second set of words, this gives you p, r, o, s/n/t, g/u.

Looking at the answer options, the answer must be 'prong'.

# **17** way

Using the same method as for Q11.

The word 'rap' is made from letters 4/7, 3 and 5/6 of 'sharp' and 'prime'.

Applied to the second set of words, this gives you k/w, a, y/a.

Looking at the answer options, the answer must be 'way'.

#### 18 each

Using the same method as for Q11.

The word 'mare' is made from letters 10, 2/9, 5/7 and 4/8 of 'water' and 'dream'.

Applied to the second set of words, this gives you e, a/l, t/c, h/a.

Looking at the answer options, the answer must be 'each'.

#### 19 more

Using the same method as for Q11.

The word 'grit' is made from letters 6/7, 3/8, 10 and 2 of 'strong' and 'grainy'.

Applied to the second set of words, this gives you e/m, o, r, e.

So, the answer is 'more'.

### 20 they

Using the same method as for Q11.

The word 'pare' is made from letters 5/12, 10, 7/11 and 6/13 of 'whisper' and 'sharpen'.

Applied to the second set of words, this gives you t/n, h, e, h/y.

Looking at the answer options, the answer must be 'they'.

### 21 B

The order is Mara, Lara, Sara, Zara.

Then Dara is placed one above Zara, which puts her equal with Sara.

### 22 C

All darts players play snooker and all snooker players play pool.

Therefore, all darts players play pool.

The other statements cannot be proved or disproved from the given information.

# **Mathematics**

**1 D** 0.6 is six-tenths or  $\frac{6}{10}$ , which is equivalent to  $\frac{3}{5}$ .

[Fractions, Decimals and Percentages]

**B** Between a and b, they travelled 60 km in 45 minutes.

That is 20 km in 15 minutes, which is equivalent to 80 km in 60 minutes, i.e. 80 kilometres per hour.

[Statistics; Speed, Distance and Time]

**C** Be careful – it looks like you might be able to draw a rectangle on a diagonal, but the corners would not be right angles; it is actually a parallelogram.

[Properties of Shapes]

**A** 3D shapes with 5 faces are 'pentahedrons', of which there are two you should know: triangular prism and square-based pyramid.

Only the pyramid has a vertex shared by four faces.

[Properties of Shapes]

**5 C** Add up all of the values and divide by five.

$$285 + 180 + 35 + 65 + 180 = £745$$
  
£745 ÷ 5 = £149

[Statistics]

**6 E** Dividing by smaller numbers gives larger results.

The results are: 3000, 30, 3000, 300 and 30000.

[Operations]

**7 B** The fold line acts like a mirror line – the shape is reflected across it to produce a symmetrical shape.

[Reflection, Rotation and Symmetry]

**8 D** 
$$Y = 3Z \text{ and } X = 2Y$$

So, 
$$X = 6Z$$

$$X + Y + Z = 3Z + 6Z + Z = 10Z$$

$$10Z = 180^{\circ}$$

$$Z = 18^{\circ}$$

$$Y = 3Z$$

$$Y = 3 \times 18 = 54^{\circ}$$

[Angles and Degrees; Algebra]

**9 D** 
$$10 \text{ km} = 10 \times 25 \text{ p} = 250 \text{ p}$$

There is a 500 p base fare.

$$500p + 250p = 750p$$

$$1750 p - 750 p = 1000 p$$

Which is  $1000 p \div 50 p = 20$  minutes

[Operations; Money]

**10 C** 
$$80 \times 50 \times 70 = 280\,000\,\text{cm}^3$$
.

100 cm<sup>3</sup> per 30 seconds is 200 cm<sup>3</sup> per minute.

$$280\,000 \div 200 = 1400 \text{ minutes}$$

[Perimeter, Area and Volume; Speed, Distance and Time]

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**11 A** 
$$15 \times 2 = 30$$

$$30 \div 3 = 10$$

$$10 \times 10 = 100$$

$$100 - 5 = 95$$

$$95 \times 2 = 190$$

[Operations]

**12 C** A is false: odd  $\times$  even = even.

B is false: 1 cubed is the same as 1 squared.

C is true: negative × negative is always positive.

D is false: positive  $\times$  negative = negative.

E is false: even + odd = odd.

[Special Numbers]

**13 D** The first person has four hands to shake.

The second has already shaken one hand, so has three more.

The third person has already shaken two, so has two more.

The fourth person has one left to shake.

The last person has already shaken hands with all the other people.

$$4 + 3 + 2 + 1 + 0 = 10$$

[Operations]

**14 A** 
$$3.5\% = 0.035$$

$$\frac{1}{20} = 0.05$$

$$\frac{2}{50} = \frac{4}{100} = 0.04$$

$$4\% = 0.04$$

[Fractions, Decimals and Percentages]

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**15 B** 
$$82 + 24 + 41 = 147$$
  
 $18 + 11 = 29$   
 $147 - 29 = 118$ 

[Operations]

**16 E** 
$$17z \times 3 = 51z$$
  
 $17z + 17z + 51z = 85z$   
[Algebra]

**17 B** The best way to approach this is to navigate the maze and crosscheck the movements against the answer options.

You will quickly see where the errors lie!

[Position and Direction]

There are 3 + 7 = 10 parts in total.

$$6 \times 10 = 60$$
 children

[Ratio and Proportion]

20 C Small bag = 
$$450 g \div 2 = 225 g$$
  
 $450 + 450 + 225 + 225 + 225 = 1575 g$   
 $1575 \times 2 = 3150 g = 3.15 kg$   
[Measurements]

# Non-Verbal Reasoning Subsection 1

# **Practice Section**

- **1 A** (A = black and E = shape)
- **D** (M = odd number of shapes and <math>N = white)

#### **Test**

#### 1 E

The first letter codes for the type of large shape; the second letter codes for type of small shape; and the third letter codes for the shading of the large shape.

#### 2 C

The first letter codes for the type of small shape; the second letter codes for the line style of the large shape; and the third letter codes for the orientation of the large shape.

#### 3 D

The first letter codes for the number of thick vertical lines on the arrow; the second letter codes for the direction of the arrow; and the third letter codes for the shading of the arrowhead.

### 4 E

The first letter codes for the number of divisions in the shape; the second letter codes for the type of shape; and the third letter codes for the shading of the divisions.

### **5 A**

The first letter codes for the type of shapes; the second letter codes for the shading of the shapes; and the third letter codes for the number of shapes.

#### 6 A

The first letter codes for the line style of the large shape; the second letter codes for the type of horizontal line inside the large shape; and the third letter codes for the type of small outer shape.

### 7 E

The first letter codes for the position of the circle under the horizontal line; The middle letter codes for the horizontal line style; and the third letter codes for the small shape above the line.

#### 8 D

The first letter codes for the type of shape in the centre of the figure; the middle letter codes for the configuration of lines to the left of the figure; and the third letter codes for the direction of the arrow on the right of the figure.

# Non-Verbal Reasoning Subsection 2

#### **Practice Section**

- **1 B** (The figure rotates 45° clockwise each time.)
- **C** (The question mark rotates 90° anticlockwise each time, and there is one more intersection of lines.)

# **Test**

#### 1 C

Circles fill the lower row of triangles and triangles fill the upper row. The shading of the shapes is the same in adjacent pairs.

#### 2 B

The first figure in each pair of triangles flips in the second and the shapes swap shading.

#### 3 E

From left to right, an extra hexagon is added each time and the shading alternates between white and grey.

#### 4 A

From left to right, the figure rotates 60° clockwise each time. The style of lines are in pairs and the circle and triangle alternate.

#### 5 E

From left to right, the shapes alternate between a hexagon and a circle and they divide into halves and then quarters along the series.

#### 6 D

From left to right, the shapes repeat every third triangle and they are shaded in pairs.

# 7 C

From left to right, the large shapes alternate each time; the small shapes repeat every three triangles; the fill of the small shapes alternates; and the line style of the large shapes is in pairs.

# 8 E

From left to right, the figure rotates 60° clockwise each time, gaining an extra curve and losing a short thick line from the left end.

# **Spatial Reasoning**

# **Practice Section**

- 1 B
- 2 A

# **Test**

- 1 D
- 2 C
- 3 B
- 4 A
- 5 E
- 6 C
- 7 E
- 8 D