

11+ Bucks NVR, Spatial Reasoning & Maths Tests

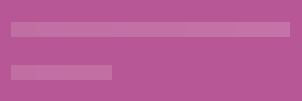
✓ 8 BUCKS Practice Papers

✓ 1000+ BUCKS Style MCQs



✓ Detailed Answers & Hints

✓ Mirrors Real Exam Pattern



11+ Bucks

Paper 2 - Session 2

Instructions:

1. Do not turn over this page until instructed to do so.
2. This paper contains **three tests**:
 - Test 1: **Non-Verbal Reasoning (NVR)**
 - Test 2: **Spatial Reasoning**
 - Test 3: **Maths**
3. Each test contains specific instructions. Read them carefully before starting.
4. Listen carefully to the **instructions read out by the invigilator**. They will guide you through the test process.
5. Check that your **name** and **date of birth** are correctly shown on the answer sheet.
6. In the answer sheet, **mark** the correct answer by **drawing a line with your pencil** through the small rectangular box beside it like this. 
7. You must make sure that you **mark your answer in the box** that has the **same question number** as the question you are doing in the paper.
8. If you make a mistake, rub out your mark as well as you can and mark your new answer.
9. The answer sheet will be marked by a computer.
10. You may **do any rough work** on the **question paper**.
11. This is a **multiple-choice test**. Each question carries **1 mark**.
12. Some questions may require you to mark two correct answers, so make sure you read the instructions carefully in each section of the test.
13. At the bottom of each page in the paper are instructions mentioned below telling you:

to stop

Do not turn the page until told to do so 

to go on

Please go on to the next page >>>

or whether you have reached the end of the test paper.

END OF TEST PAPER

11+ Bucks

Session 2 - Test 1

Non-Verbal Reasoning

Instructions:

1. Do not turn over this page until instructed to do so.
2. There are **three sub-tests**.
3. Each sub-test begins with an untimed practice section, conducted with the invigilator.
 - The **first question** is solved with a detailed solution.
 - The remaining **two questions** are for you to attempt.
4. Each sub-test has **five** main questions.
5. Each sub-test is timed individually (**5 minutes** per sub-test).
6. Total time for main questions is **15 minutes**.
7. Work quickly and carefully through the questions.
8. If you finish early, go back and check your work.
9. This is a **multiple-choice test**. Each question carries **1 mark**.

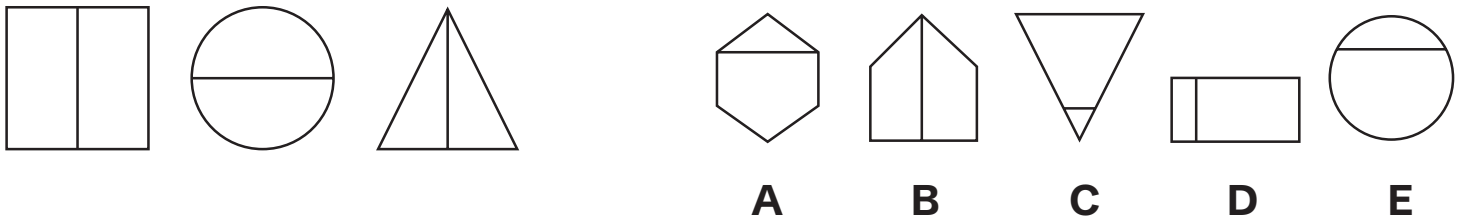


NVR Sub-test 1 Practice Section

Take as much time as you need to read this example carefully and complete the practice question that follows.

***On the left, three shapes share a common pattern or rule.
From the five answer choices on the right, select the shape that
follows the same pattern as the ones on the left.***

Example



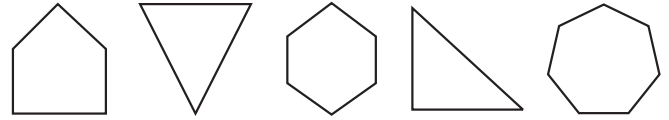
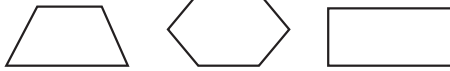
*The correct answer is **B**.*

Each figure is divided into two equal parts, either vertically or horizontally, creating symmetrical halves.



Now try the practice questions below. Work out the correct answer and mark it on the answer sheet.

P1



A

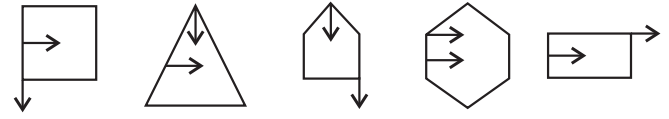
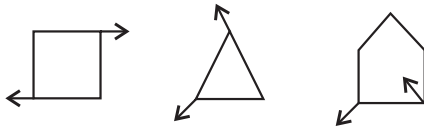
B

C

D

E

P2



A

B

C

D

E

This is the end of NVR Sub-test 1 Practice Section.





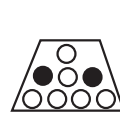
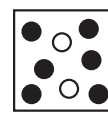
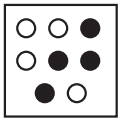
NVR Sub-test 1

You have **5 minutes** to complete these **five questions**.

This section is **marked**.

**On the left, three shapes share a common pattern or rule.
From the five answer choices on the right, select the shape that
follows the same pattern as the ones on the left and mark its
letter on your answer sheet.**

1



A

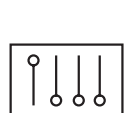
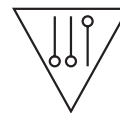
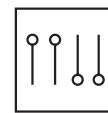
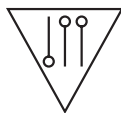
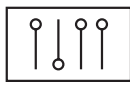
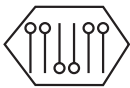
B

C

D

E

2



A

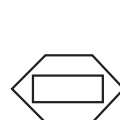
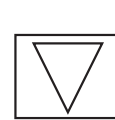
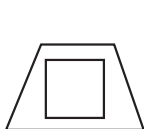
B

C

D

E

3



A

B

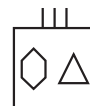
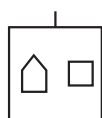
C

D

E



4

**A****B****C****D****E**

5

E	A	
L		R
D		H

8	P	6
		7
A	3	

5		
3		6
2	9	8

3		8
7		
4	6	5

		M
A		L
B	H	J

8		9
H		
4	3	A

L	M	
C		P
	H	G

7	5	
3		4
2	6	

A**B****C****D****E****This is the end of NVR Sub-test 1.**



NVR Sub-test 2 Practice Section

Take as much time as you need to read this example carefully and complete the practice question that follows.

On the left, some pictures have code letters that describe them. Work out what each letter means. A new picture is shown on the right with five possible codes. Choose the correct code for the new picture.

Example

	AH						
	RL		AL	RL	AH	BL	BH
	BH		A	B	C	D	E

The correct option is **D**. The coding system uses two letters where the first letter (A, R, B) indicates the line type (slanting, vertical, horizontal) and the second letter (H, L) indicates the outline type (thick, dotted). Since option D is "BL", it represents horizontal lines with a dotted outline. This matches the new picture that must contain horizontal lines with a dotted outline.



Now try the practice questions below. Work out the correct answer and mark it on the answer sheet.

P3



SB



GA



LB



GB

A

GA

B

LA

C

SB

D

SA

E

P4



VB



WC



XC



VC

A

XB

B

WC

C

WB

D

VB

E

This is the end of NVR Sub-test 2 Practice Section.





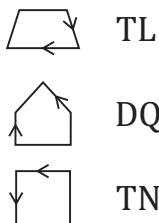
NVR Sub-test 2

You have **5 minutes** to complete these **five questions**.

This section is **marked**.

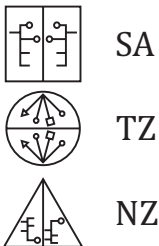
On the left, some pictures have code letters that describe them. Work out what each letter means. A new picture is shown on the right with five possible codes. Choose the correct code for the new picture and mark its letter on your answer sheet.

6



DQ TN DN TQ DL
A B C D E

7



TZ SZ TA NA NZ
A B C D E

8



CBS CAH CBH DBE DBH
A B C D E



9



GSA



PBC



GNC



PSA

PBA

GNA

GNC

GBC

A**B****C****D****E**

10



PFS



QGS



RGT



PGS

PFT

PFS

QGT

QFT

A**B****C****D****E****This is the end of NVR Sub-test 2.**

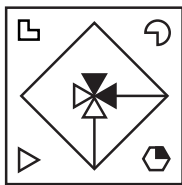
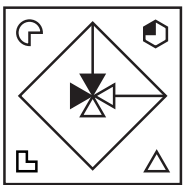
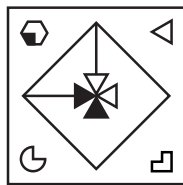
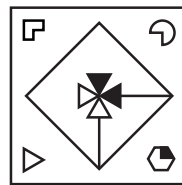
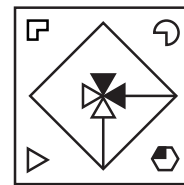
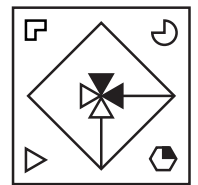


NVR Sub-test 3 Practice Section

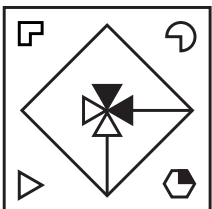
Take as much time as you need to read this example carefully and complete the practice question that follows.

A shape is shown on the left. On the right, there are five answer choices. One of them is the correct 90° clockwise rotation of the shape on the left. Find the rotated shape.

Example

**A****B****C****D****E**

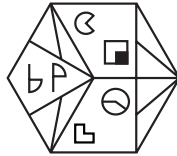
The correct option is **C**. The original shape is a diamond with a star in the centre and different shapes at each corner. When rotated 90° clockwise, the entire figure turns to the right, maintaining all its features in their relative positions. Option C shows this proper rotation with all elements correctly positioned.





Now try the practice questions below. Work out the correct answer and mark it on the answer sheet.

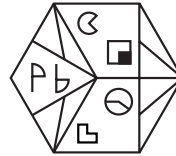
P5



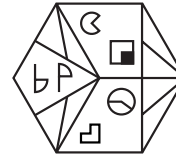
A



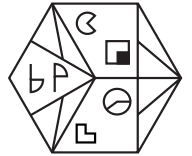
B



C



D



E

P6



A



B



C



D



E

This is the end of NVR Sub-test 3 Practice Section.

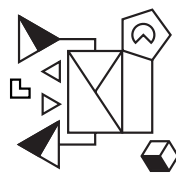
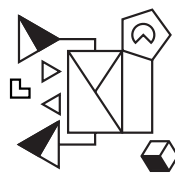
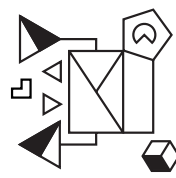


NVR Sub-test 3

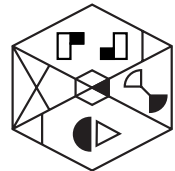
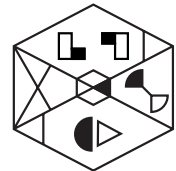
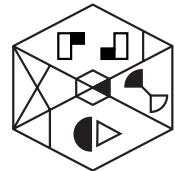
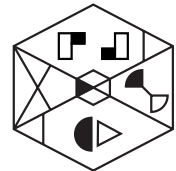
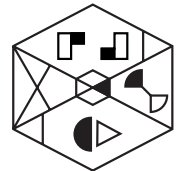
You have **5 minutes** to complete these **five questions**.
This section is **marked**.

A shape is shown on the left. On the right, there are five answer choices. One of them is the correct 90° clockwise rotation of the shape on the left. Find the rotated shape and mark its letter on your answer sheet.

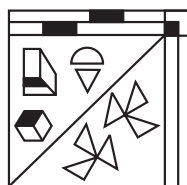
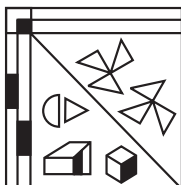
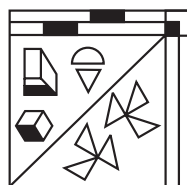
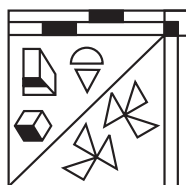
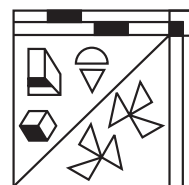
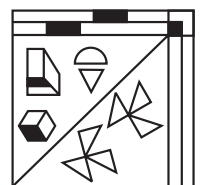
11

**A****B****C****D****E**

12

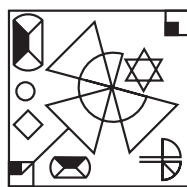
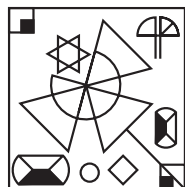
**A****B****C****D****E**

13

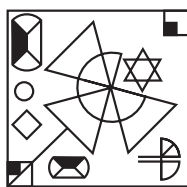
**A****B****C****D****E**



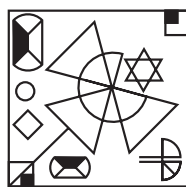
14



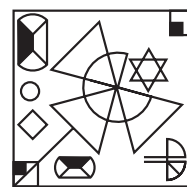
A



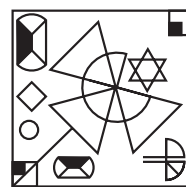
B



C

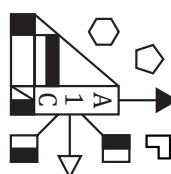
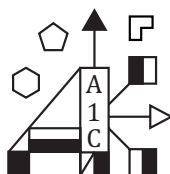


D

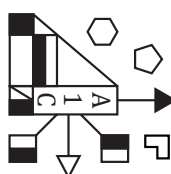


E

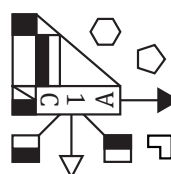
15



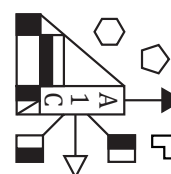
A



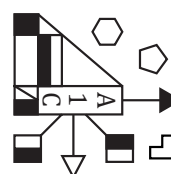
B



C



D



E

This is the end of NVR Sub-test 3.



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Session 2 - Test 2

Spatial Reasoning

Instructions:

1. Do not turn over this page until instructed to do so.
2. There are **five sub-tests**.
3. Each sub-test begins with an untimed practice section, conducted with the invigilator.
 - The **first question** is solved with a detailed solution.
 - The remaining **two questions** are for you to attempt.
4. Each sub-test has **five** main questions.
5. Each sub-test is timed individually (**4-5 minutes** per sub-test).
6. Total time for main questions is **10 minutes**.
7. Work quickly and carefully through the questions.
8. If you finish early, go back and check your work.
9. This is a **multiple-choice test**. Each question carries **1 mark**.

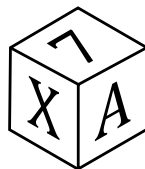
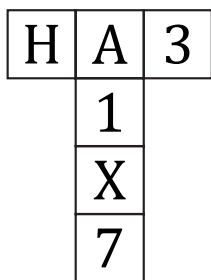
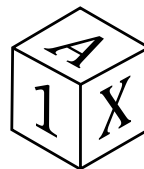
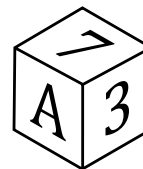


Spatial Reasoning Sub-test 1 Practice Section

Take as much time as you need to read this example carefully and complete the practice question that follows.

A cube net is shown on the left. On the right, there are five cube options. One of them can be correctly folded from the given net. Identify the correct cube.

Example

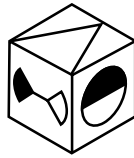
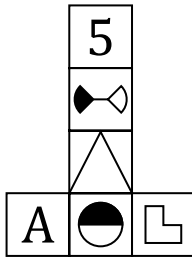
**A****B****C****D****E**

The correct option is **D**. When folding the cube net, opposite faces would be A-X, 1-7, and 3-H. Looking at each option, only option D (A3) correctly places these symbols according to the cube net's folding pattern. The other options incorrectly position at least one of the symbols that should be opposite each other on a properly folded cube.

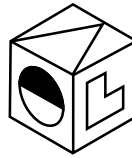


Now try the practice questions below. Work out the correct answer and mark it on the answer sheet.

P1



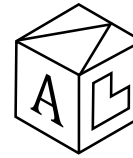
A



B



C

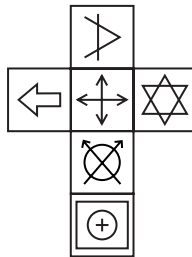


D



E

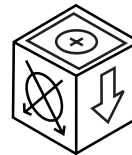
P2



A



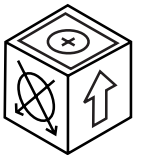
B



C



D



E

This is the end of Spatial Reasoning Sub-test 1 Practice Section.





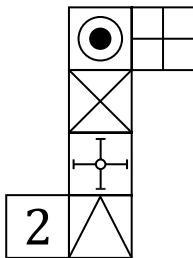
Spatial Reasoning Sub-test 1

You have **5 minutes** to complete these **five questions**.

This section is **marked**.

A cube net is shown on the left. On the right, there are five cube options. One of them can be correctly folded from the given net. Identify the correct cube and mark its letter on your answer sheet.

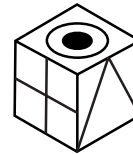
1



A



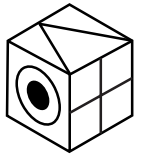
B



C

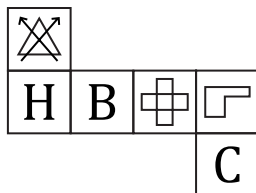


D



E

2



A



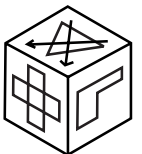
B



C

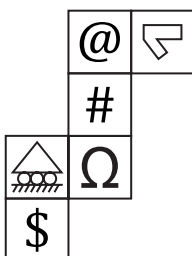


D



E

3



A



B



C



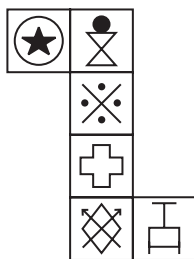
D



E



4



A



B



C

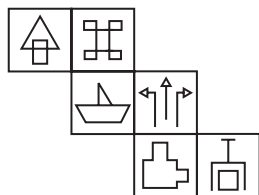


D



E

5



A



B



C



D



E

This is the end of Spatial Reasoning Sub-test 1.



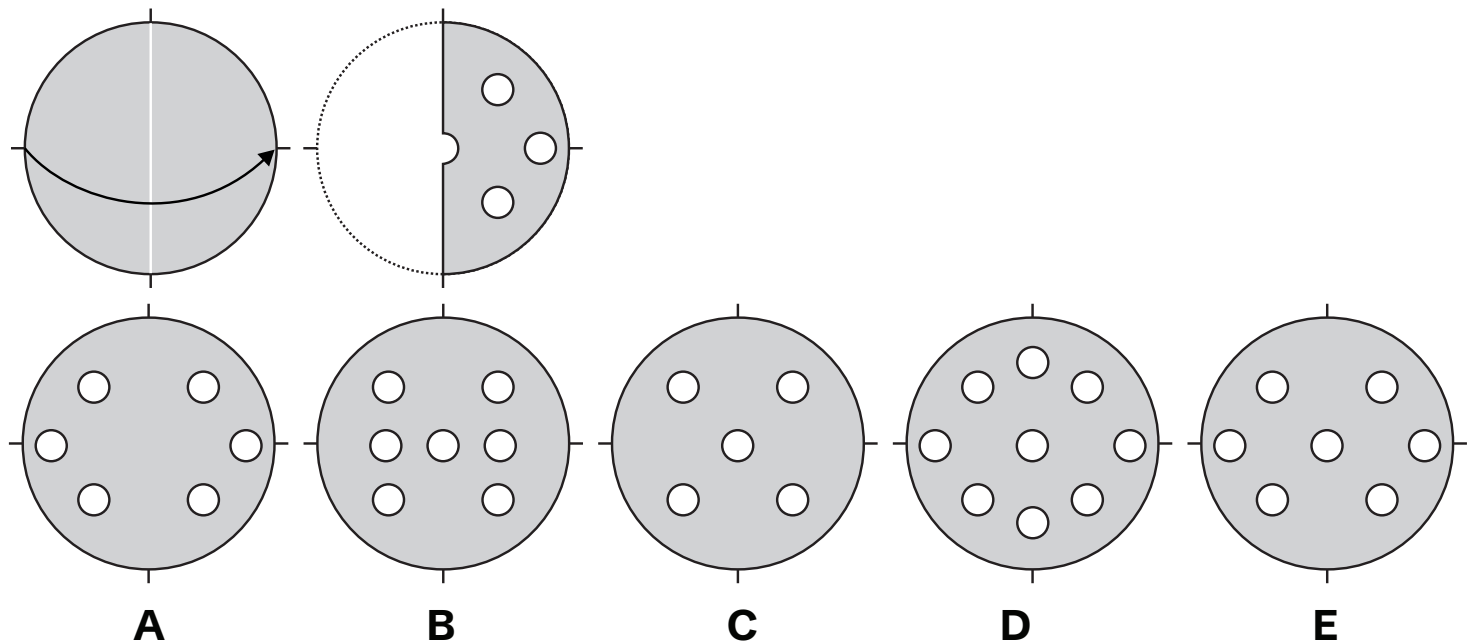


Spatial Reasoning Sub-test 2 Practice Section

Take as much time as you need to read this example carefully and complete the practice question that follows.

A folded piece of paper with punched holes is shown on the left. When the paper is unfolded, the holes will appear symmetrically across the folds. On the right, there are five answer choices showing possible unfolded versions of the paper. Identify the correct unfolded pattern.

Example

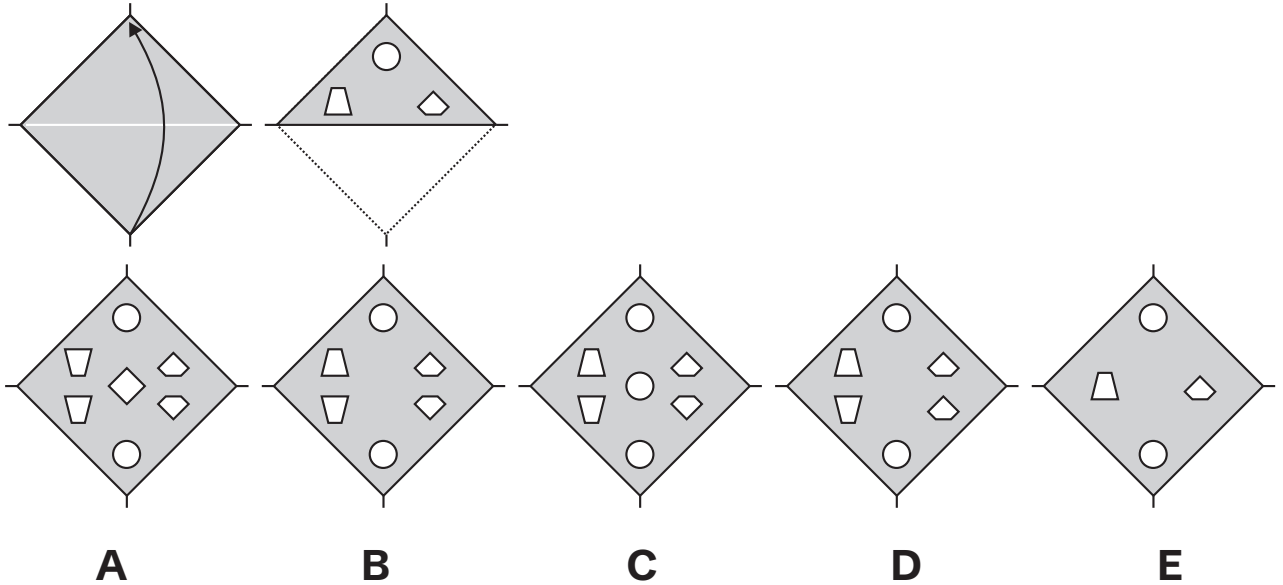


*The correct answer is **E**. In this question, paper is folded vertically. Then punch holes are made on the folded paper. Three circles will replicate completely and one cut in the middle will make it a complete circle.*

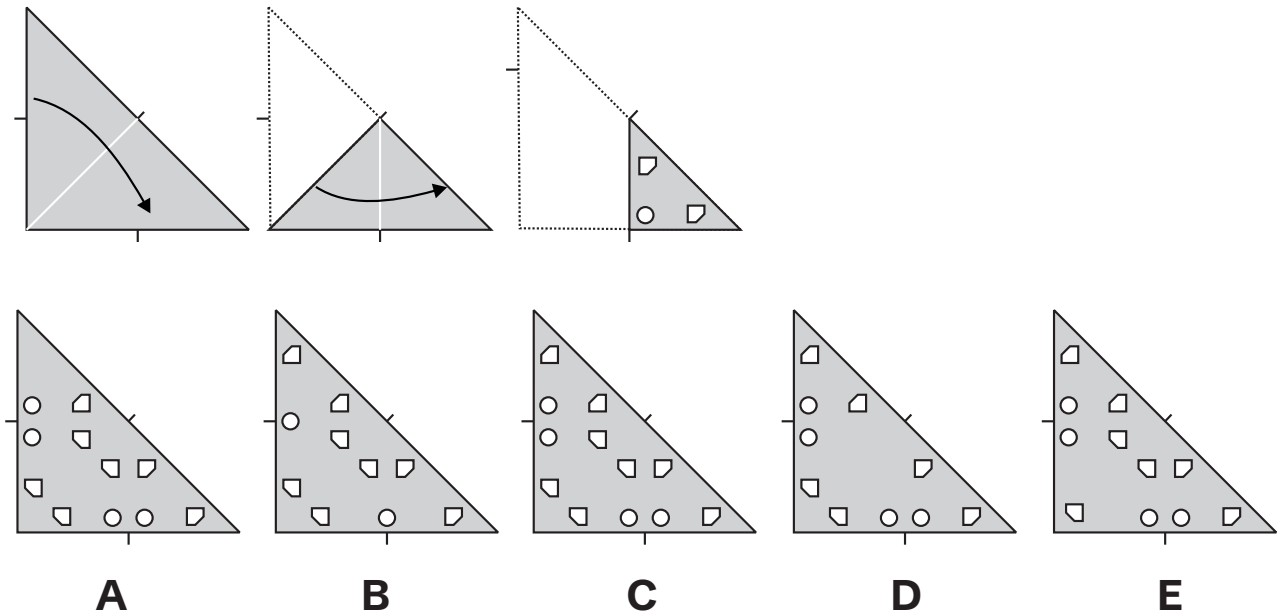


Now try the practice questions below. Work out the correct answer and mark it on the answer sheet.

P3



P4



This is the end of Spatial Reasoning Sub-test 2 Practice Section.



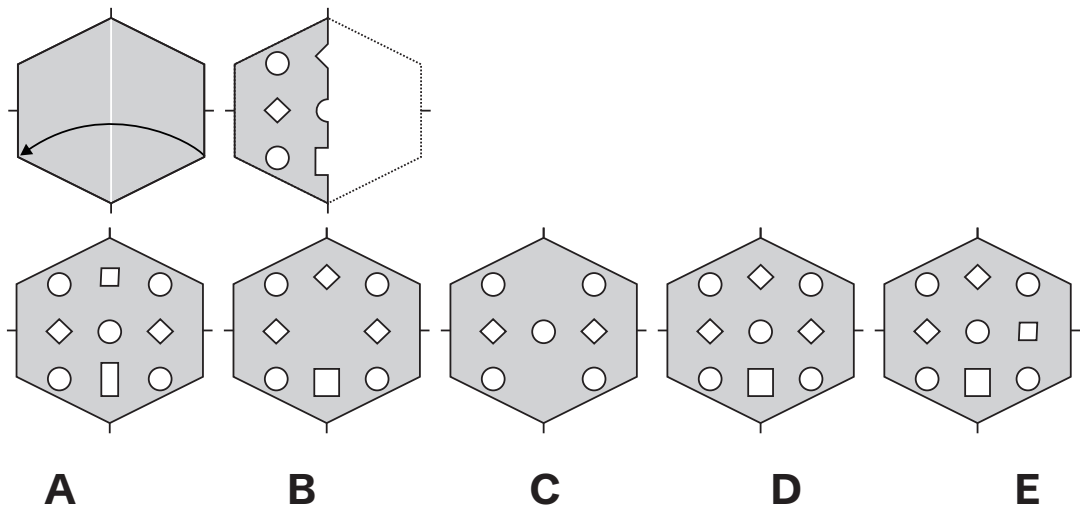
Spatial Reasoning Sub-test 2

You have **5 minutes** to complete these **five questions**.

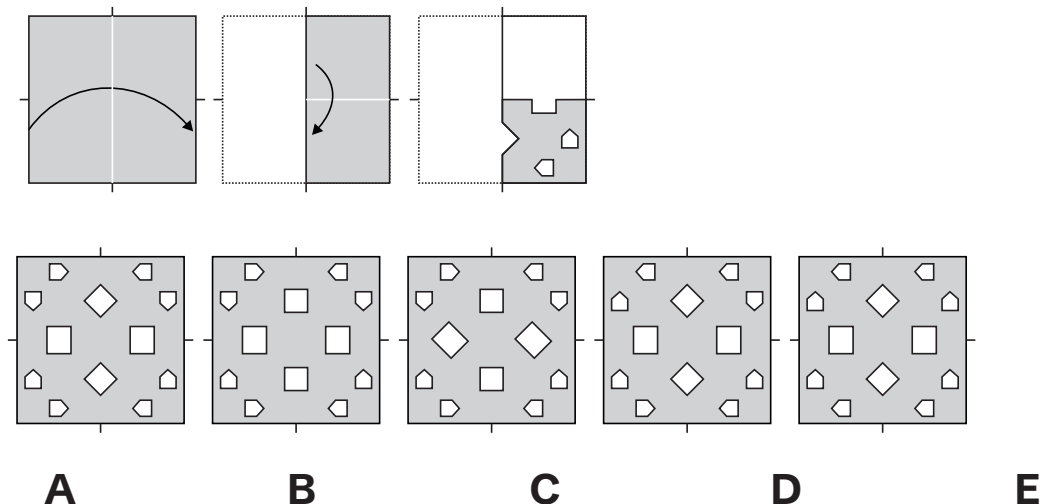
This section is **marked**.

A folded piece of paper with punched holes is shown on the left. When the paper is unfolded, the holes will appear symmetrically across the folds. On the right, there are five answer choices showing possible unfolded versions of the paper. Identify the correct unfolded pattern and mark its letter on your answer sheet.

6

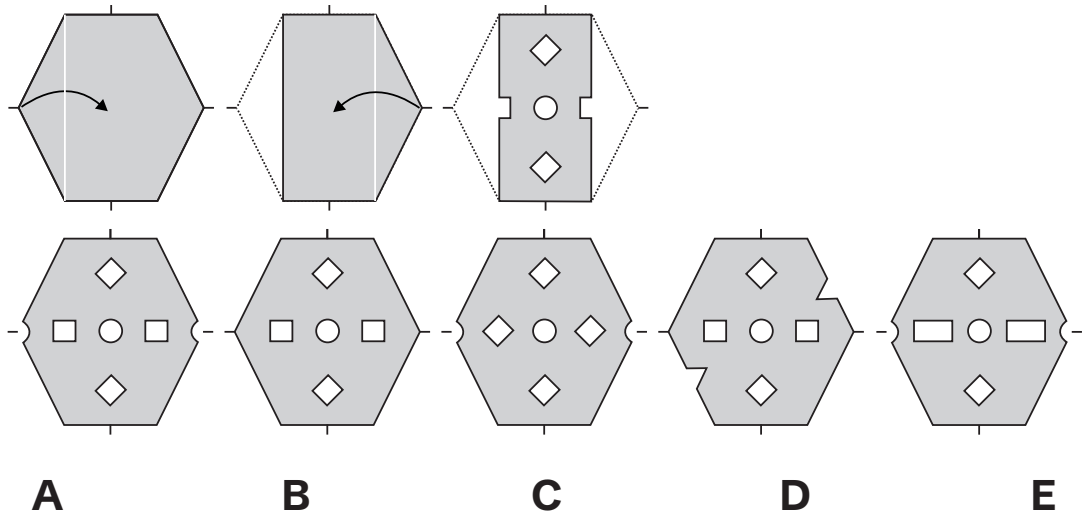


7

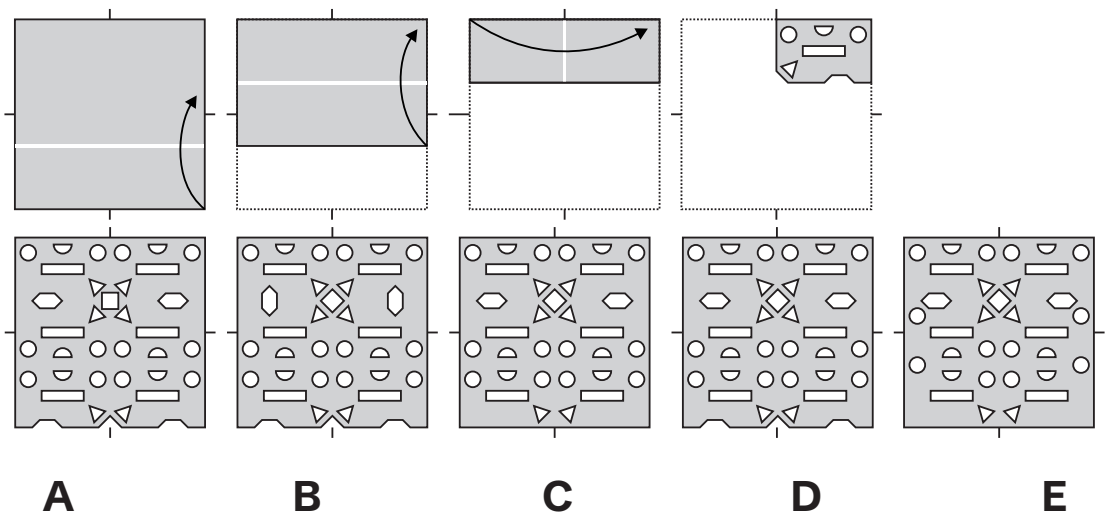




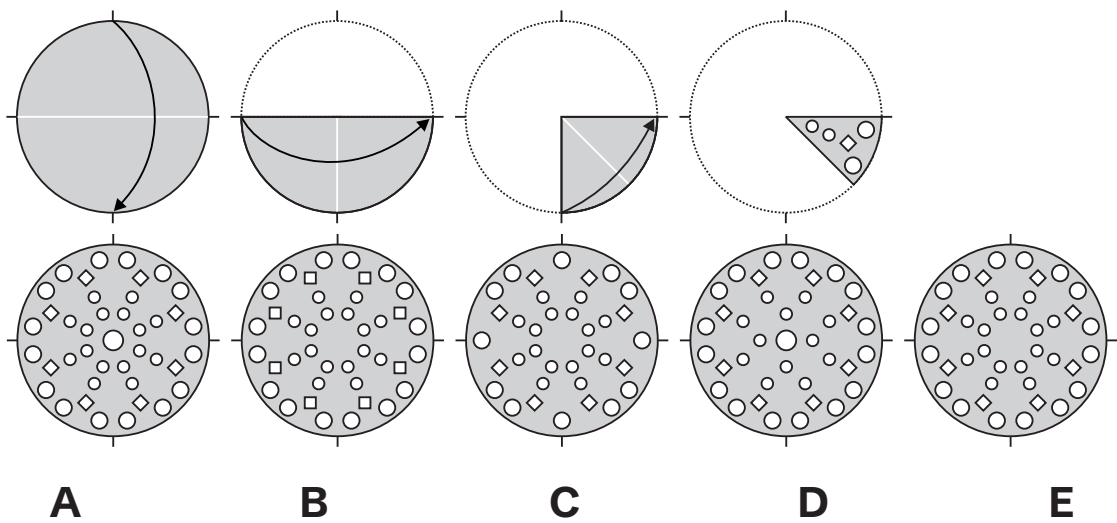
8



9



10



This is the end of Spatial Reasoning Sub-test 2.

11+ Bucks

Session 2 - Test 3

Paper 2 - Maths

Instructions:

1. Do not turn over this page until instructed to do so.
2. The test begins with a **5-minute practice section**.
3. The practice section includes 4 questions.
4. The practice section is followed by the main questions.
5. Total time for the main questions is **25 minutes**.
6. Work quickly and carefully through the questions.
7. If you finish early, go back and check your work.
8. This is a **multiple-choice test**. Each question carries **1 mark**.

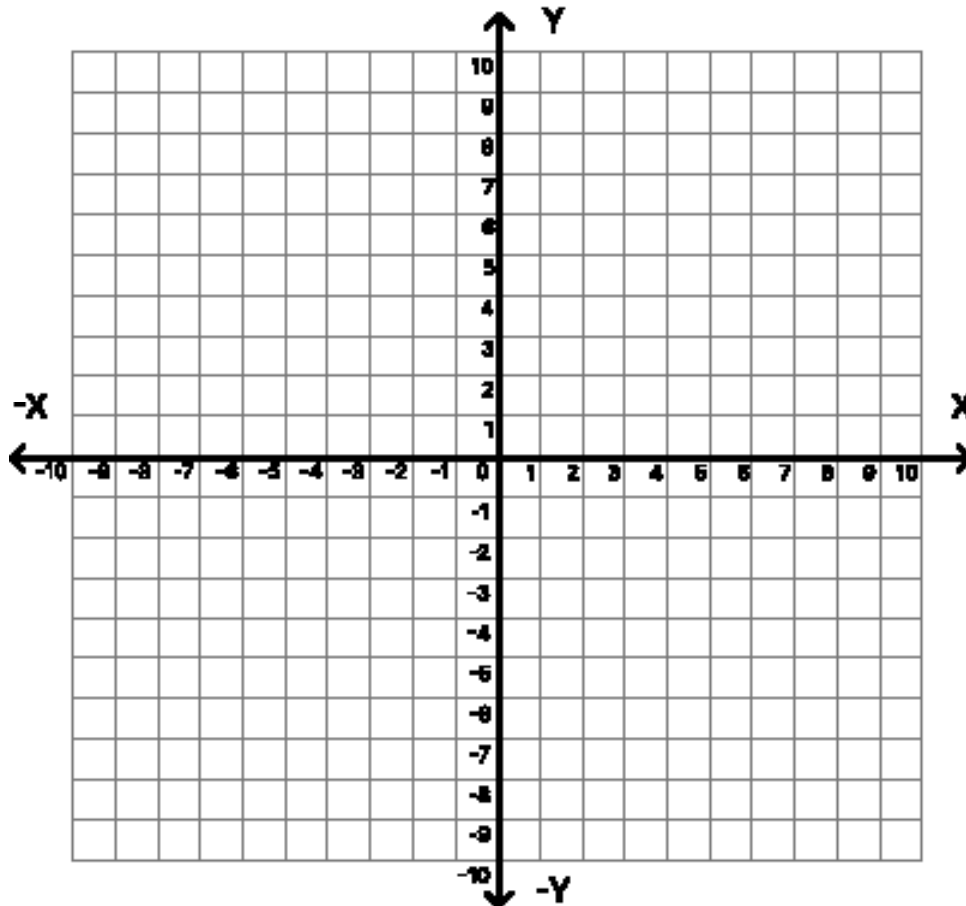


Maths: Practice Section (5 mins)

Try practice questions below. Work out the correct answer and mark it on the answer sheet.

P1

Three vertices of a kite are (5, 6), (7, 3) and (5, -4).



What are the coordinates of the missing vertex of the kite?

- A** (2, 5) **B** (3, 3) **C** (2, 3) **D** (3, 2) **E** (4, 4)

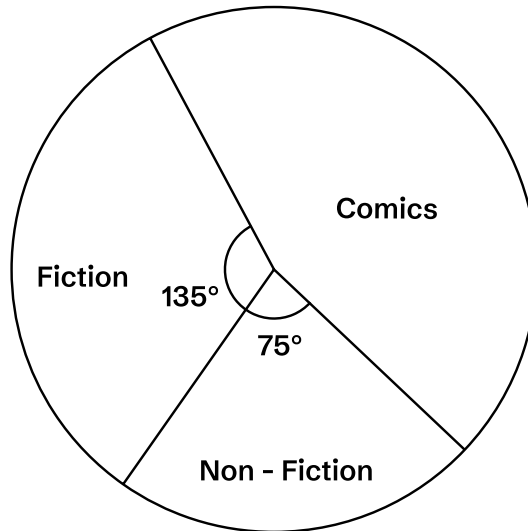
P2

Work out the value of $\frac{2}{3} + \frac{3}{5}$

- A** $2\frac{1}{15}$ **B** $1\frac{4}{15}$ **C** $2\frac{3}{15}$ **D** $1\frac{1}{15}$ **E** $1\frac{7}{15}$



P3 A library has books classified into fiction, non-fiction, and comics. The pie chart below shows how the books are divided.



There are 96 books in the library.

How many books are comics?

- A** 10 **B** 40 **C** 42 **D** 12 **E** 15

P4 Calculate the average of the numbers 7, 12, 15, and 18.

- A** 10 **B** 12 **C** 13 **D** 14 **E** 15

This is the end of the Maths practice section.



Maths

You have **25 minutes to complete** this section. There are **22 questions**. This section is **marked**.

1

In a bookstore, a notebook costs £4. The store manager reduces the price of everything by 12%.

How much will the notebook cost?

A £3.48 **B** £3.50 **C** £3.52 **D** £3.56 **E** £3.58

2

Look at the pictogram below about how many books children read during the half-term break.

Name	Book Read
Emma	   
James	     
Sophie	   
Oliver	    
Lily	  

Oliver read 10 books.

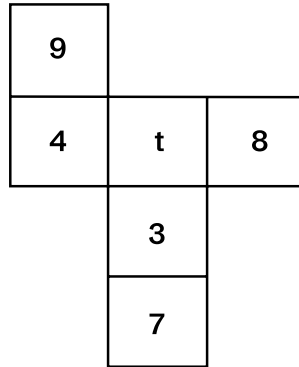
How many books did Emma read?

A 6 **B** 8 **C** 7 **D** 10 **E** 9



3

A net of a cube is shown below. When this cube is folded up, the numbers on opposite faces add up to 12.



What is the value of t ?

- A** 9 **B** 5 **C** 3 **D** 10 **E** 4

4

There are 60 colored counters in a jar. One-third of them are blue, one-sixth are yellow, and the rest are green.

If a counter is selected at random from the jar, what is the probability of selecting a green counter?

- A** $\frac{1}{6}$ **B** $\frac{1}{4}$ **C** $\frac{1}{3}$ **D** $\frac{1}{2}$ **E** $\frac{3}{5}$

5

Maya has a collection of marbles in three colour are blue, red, and green. She notices that the ratio of blue marbles to red marbles is 3 : 5 and the ratio of red marbles to green marbles is 5 : 8.

If she has 20 red marbles, how many marbles in total does Maya have in her collection?

- A** 48 **B** 52 **C** 56 **D** 60 **E** 64

**6**

£270 is shared between Leo, Ava, and Noah so that Leo gets three times as much as Ava and Ava gets twice as much as Noah.

How much does Noah get?

- A** £15 **B** £20 **C** £25 **D** £30 **E** £35

7

In a science quiz out of 10, a group of students received the following scores:

5, 10, 8, 7, 9, 7, 3

What was the average (mean) score?

- A** 5.8 **B** 6.2 **C** 6.0 **D** 6.5 **E** 7.0

8

A square has an area of 36 cm^2 .

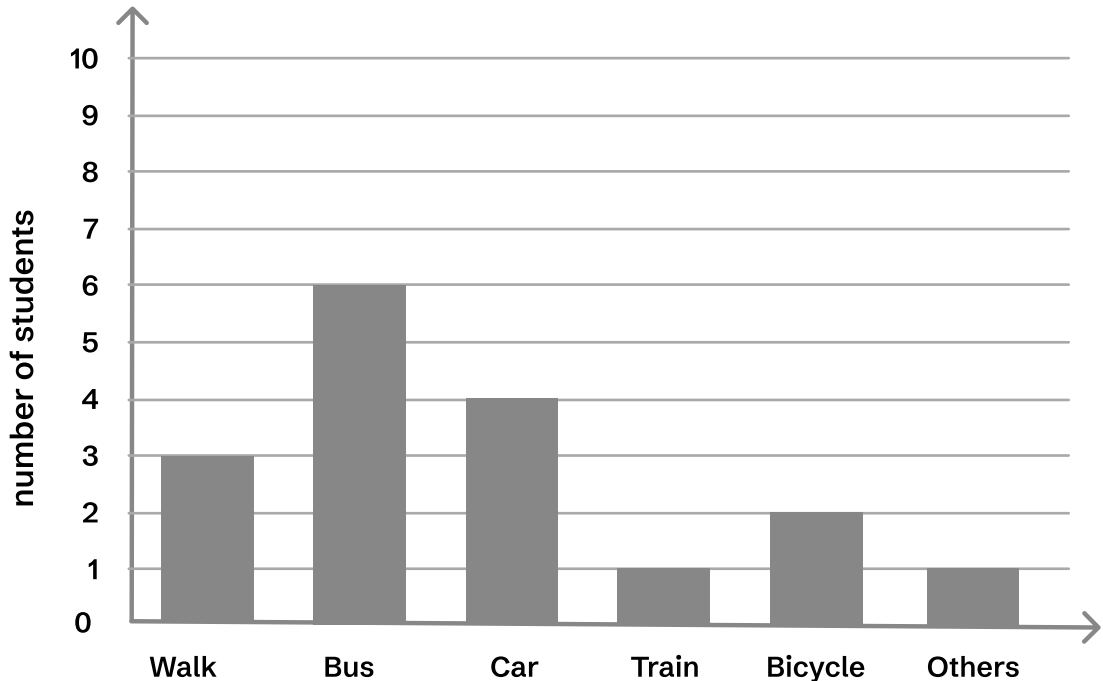
Work out the perimeter of this square.

- A** 18 cm **B** 22 cm **C** 24 cm **D** 30 cm **E** 12 cm



9

Sarah conducted a survey of students in her class about how they travel to school each day. Here is a bar chart showing her results:



How many more students travel by bus than by bicycle?

- A** 4 **B** 8 **C** 10 **D** 12 **E** 16

10

It takes 6 gardeners 4 hours to mow a large park. Assuming the gardeners work at the same pace.

How long would it take 9 gardeners to mow the same park?

- A** 2 hours 35 minutes **B** 3 hours 50 minutes
C 2 hours 40 minutes **D** 2 hours 45 minutes
E 3 hours 20 minutes



11 Which two of the numbers have exactly three factors?

4 9 16 36 64

A 4 and 36

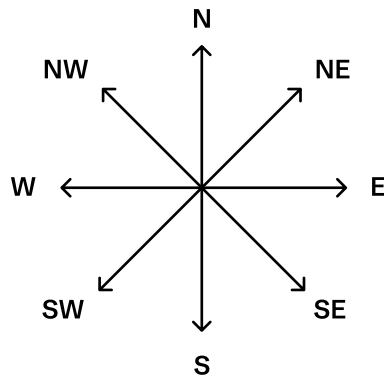
B 4 and 9

C 16 and 64

D 36 and 64

E 9 and 36

12 Lucy is facing South. He turns through 135° in a clockwise direction, followed by 225° in an anticlockwise direction.



Which direction is Lucy facing now?

A East

B Southeast

C West

D Northeast

E Northwest

13 Noah spins a fair spinner that has 4 equal sections: red, blue, green, and yellow.

If he spins the spinner 20 times, how many times should he expect to land on red?

A 3 spins

B 4 spins

C 5 spins

D 6 spins

E 7 spins



14

Max and Olivia are both cycling on the same path. Max cycles at a speed of 12 kilometres per hour. Olivia cycles at the same speed as Max but travels a total of 16 kilometres, while Max travels only 12 kilometres.

How many more minutes does Olivia spend cycling compared to Max?

- A** 15 minutes **B** 20 minutes **C** 25 minutes
D 30 minutes **E** 35 minutes

15

Solve $11x = 121$

- A** 9 **B** 10 **C** 11 **D** 12 **E** 13

16

A whole number P gets rounded to the nearest 10 to give 420.
A whole number Q gets rounded to the nearest 100 to give 800.

What is the smallest possible value of $Q - P$?

- A** 366 **B** 345 **C** 355 **D** 365 **E** 326

17

In a fruit basket, the ratio of apples to oranges to bananas is 4 : 3 : 5. There are 6 more bananas than oranges.

How many apples are there?

- A** 8 **B** 10 **C** 12 **D** 14 **E** 16



18

Find the number n to make this mathematical statement true?

$$9 \times n + 13 = 6 \times n + 25$$

A 3**B 2****C 4****D 6****E 5**

19

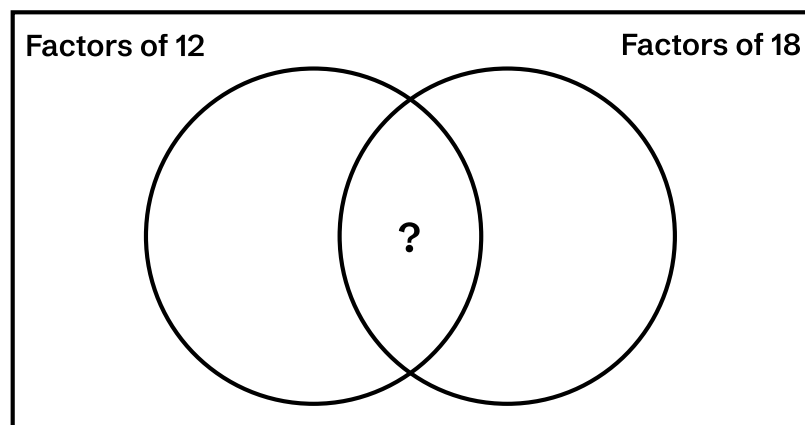
At Westfield Academy, 25% of the students normally at school are in Year 8. One day, some Year 8 students miss school for a field trip. The total number of students left at school is then 360. The proportion of these remaining students who are in Year 8 is now 15%.

How many students are normally at school in total?

A 396**B 400****C 408****D 416****E 420**

20

(?) in the Venn Diagram represents the common factor of both 12 and 18



What will be the count of the common factors that should replace the (?) in the Venn Diagram given above?

A 5**B 6****C 8****D 4****E 7**



21

You have a bag of marbles numbered 1 to 60 inclusive. On each number that is a factor of 72, you place a blue dot. On each number that is a multiple of 6, you place a red dot.

What is the probability of selecting a marble that has both a blue dot and a red dot on it?

A $\frac{1}{20}$

B $\frac{1}{15}$

C $\frac{1}{12}$

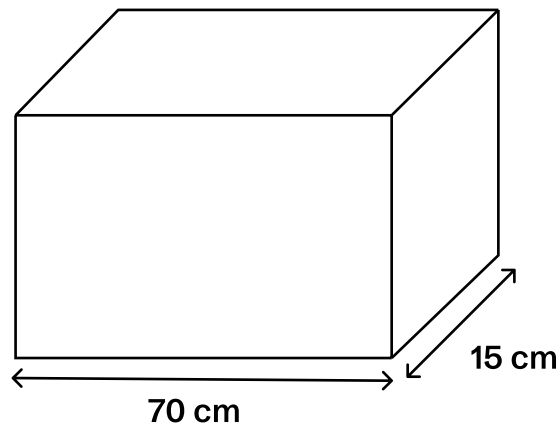
D $\frac{5}{36}$

E $\frac{1}{6}$

22

A pack of pens measures 2 cm high, 3 cm wide and 14 cm long.

What is the maximum number of packs of pens that could fit in one layer into a carton that is 70 cm long and 15 cm wide?



A 25

B 16

C 14

D 24

E 17

This is the end of the Test 3 - Maths.



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Bucks Paper 2 Session 2

Answer Marking Sheet

Pupil's Name
School Name

DATE OF TEST					
Day		Month		Year	

UNIQUE PUPIL NUMBER											

SCHOOL NUMBER							

DATE OF BIRTH					
Day		Month		Year	

Please mark boxes with a thin horizontal line like this  .



Test 1 - Non Verbal Reasoning

Sub-test 1

EXAMPLE	
A	☐
B	☒
C	☐
D	☐
E	☐

P1 PRACTICE	
A	☐
B	☐
C	☐
D	☐
E	☐

P2 PRACTICE	
A	☐
B	☐
C	☐
D	☐
E	☐

1	
A	☐
B	☐
C	☐
D	☐
E	☐

2	
A	☐
B	☐
C	☐
D	☐
E	☐

3	
A	☐
B	☐
C	☐
D	☐
E	☐

4	
A	☐
B	☐
C	☐
D	☐
E	☐

5	
A	☐
B	☐
C	☐
D	☐
E	☐

Sub-test 2

EXAMPLE	
A	☐
B	☐
C	☐
D	☒
E	☐

P3 PRACTICE	
A	☐
B	☐
C	☐
D	☐
E	☐

P4 PRACTICE	
A	☐
B	☐
C	☐
D	☐
E	☐

6	
A	☐
B	☐
C	☐
D	☐
E	☐

7	
A	☐
B	☐
C	☐
D	☐
E	☐

8	
A	☐
B	☐
C	☐
D	☐
E	☐

9	
A	☐
B	☐
C	☐
D	☐
E	☐

10	
A	☐
B	☐
C	☐
D	☐
E	☐



Sub-test 3

EXAMPLE

A	
B	
C	<input checked="" type="text"/>
D	
E	

P5

PRACTICE

A	
B	
C	
D	
E	

P6

PRACTICE

A	
B	
C	
D	
E	

11

A	
B	
C	
D	
E	

12

A	
B	
C	
D	
E	

13

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B	
C	
D	
E	

14

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B	
C	
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E	

15

A	
B	
C	
D	
E	



Test 2 - Spatial Reasoning

Sub-test 1

EXAMPLE	
A	☐
B	☐
C	☐
D	☒
E	☐

P1 PRACTICE	
A	☐
B	☐
C	☐
D	☐
E	☐

P2 PRACTICE	
A	☐
B	☐
C	☐
D	☐
E	☐

1	
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B	☐
C	☐
D	☐
E	☐

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E	☐

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C	☐
D	☐
E	☐

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C	☐
D	☐
E	☐

5	
A	☐
B	☐
C	☐
D	☐
E	☐

Sub-test 2

EXAMPLE	
A	☐
B	☐
C	☐
D	☐
E	☒

P3 PRACTICE	
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B	☐
C	☐
D	☐
E	☐

P4 PRACTICE	
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B	☐
C	☐
D	☐
E	☐

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E	☐



Test 3 - Maths

P1

PRACTICE

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P2

PRACTICE

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D	
E	

P3

PRACTICE

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P4

PRACTICE

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C	
D	
E	

For Parents use only

Marks Scored: _____ Time taken: _____

Comments _____



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