# AIMO 2026

## Sample Paper

*(Questions from the AIMO 2025 paper)*

Mathematics Association, BITS Pilani

Grade 6, 7 & 8

## Instructions

- This paper consists of 15 MCQs.
- Each question carries 2 marks.
- Use of calculators or any electronic gadgets is strictly prohibited.
- Ensure your details are clearly mentioned.

**Note for Grade 6, 7 & 8 participants:** In AIMO 2025, students of Grades 6, 7 and 8 all attempted the *same* paper, which is reproduced here as a sample. In **AIMO 2026, Grades 6, 7 and 8 will each have a separate paper** set for that grade. This sample is intended only to show the style, format and difficulty of the questions; the actual paper for your grade will be different.

**Name:** _____ **Roll Number:** _____

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**Q1.** The number of times in a day the hour hand and the minute hand of a clock are at right angles is:

(A) 44 (B) 48 (C) 24 (D) 12

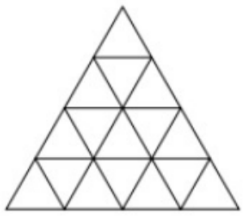
**Q2.** In each row, the number on the right is obtained using the same rule from the three numbers on the left.

$$2 \quad 3 \quad 4 \quad \rightarrow 216$$
$$3 \quad 4 \quad 5 \quad \rightarrow 720$$
$$4 \quad 5 \quad 6 \quad \rightarrow ?$$

Choose the correct answer.

(A) 1080 (B) 1440 (C) 1620 (D) 1800

**Q3.** An equilateral triangle is formed using 4 rows of identical small equilateral triangles, arranged as shown below. All edges are clearly visible. How many **distinct equilateral triangles of all possible sizes** are present in the figure?



(A) 20 (B) 24 (C) 27 (D) 30

**Q4.** Find the missing number in this pattern:

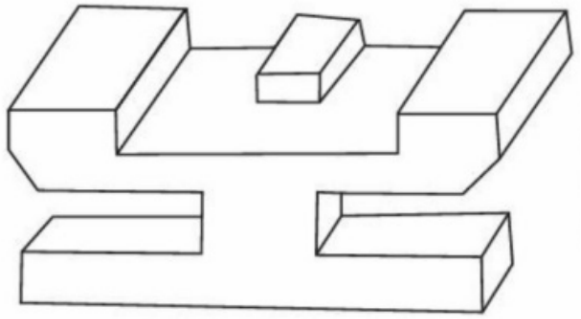
$$3,\ 10,\ 15,\ 26,\ 35,\ _____,\ 63$$

(A) 44 (B) 48 (C) 50 (D) 54

**Q5.** Pritam, Queen, Rani, Sachin, Tinu, Uri, Vineet and Sohan are sitting around a circular table, all facing the centre. Pritam is second to the right of Tinu, who is the neighbour of Rani and Vineet. Sachin is not the neighbour of Pritam. Vineet is the neighbour of Uri. Queen is not between Sachin and Sohan. Sohan is not between Uri and Sachin. Who is sitting immediately to the right of Vineet?
(A) Tinu (B) Sachin (C) Sohan (D) Pritam

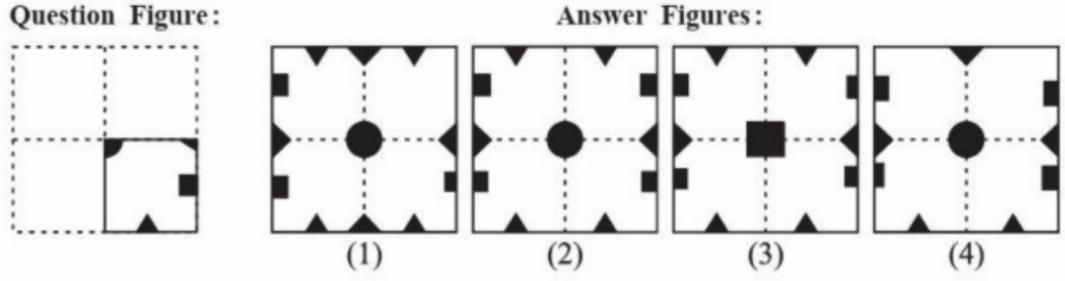
**Q6.** Let $N$ be a 4-digit number formed using the digits 1, 3, 5, 7, each exactly once, in any order. Let $R$ be the number formed by reversing the digits of $N$, and let $S = N + R$. What can you say about $S$?
(A) It is always divisible by 2.
(B) It is always divisible by 3.
(C) It is always divisible by 2 and 3.
(D) It is never divisible by 2 or 3.

**Q7.** How many faces does the figure below have?



(A) 23 (B) 24 (C) 22 (D) 25

**Q8.** A sheet of paper is folded and cut at the shaded places as shown in the question figure. Then it is unfolded. Which of the answer figures shows the unfolded paper?




(A) (1) (B) (2) (C) (3) (D) (4)

**Q9.** Only certain types of figures can be drawn without lifting the pen or retracing a line which has already been drawn. Let's call such figures *cool*. Which of the following configurations results in a *cool* figure?
(A) Any shape with an EVEN number of corners, where all the corners are connected to a single dot in the centre.
(B) Any shape with an ODD number of corners, where all the corners are connected to a single dot in the centre.
(C) Any shape with an ODD number of corners, where every corner is connected to every other corner.
(D) Any shape with an EVEN number of corners, where every corner is connected to every other corner.

**Q10.** If $13Z2$ is a multiple of 3, what is the sum + product of all possible values of $Z$?
(A) 18 (B) 9 (C) 0 (D) 27

**Q11.** In a firm, the senior workers are twice as productive and hardworking as the junior workers. If 11 senior workers and 3 junior workers work together for 4 hours, they can create 10 reports. How many reports will be made if 9 senior workers and 7 junior workers work together for 6 hours?
(A) 12 (B) 15 (C) 18 (D) 7

**Q12.** In a certain code language, FORTUNE is written as 716192122156. How will MATHEMATICS be written in the same code language?
(A) 14211961322110420
(B) 1320185122019420
(C) 14221961422110420
(D) 15232071523111521

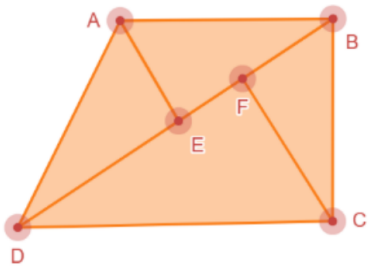
**Q13.** Let $x$ be your IQ and $y$ be the effort you put in, and let $z$ (marks) follow the relation

$$z = \frac{xy + 68 + y + 67x}{y + 67}.$$

If the maximum marks are 100, what is the approximate IQ of a student who got 100/100, assuming they put in infinite effort?
(A) 88 (B) 99 (C) 100 (D) 0

**Q14.** A decimal number that has finitely many digits after its decimal point is called a terminating decimal (rounding off is not considered here). For all natural numbers $n > 1$, the decimal expansion of $\frac{1}{n}$ terminates only if the prime factorisation of $n$ consists of the primes $X$ and $Y$ only ($Y > X$). What is the value of $Y - X$?
(A) 2 (B) 1 (C) 4 (D) 3

**Q15.** $ABCD$ is a quadrilateral in which $AE = BE = DE = 3$, $CF = 4.5$, $\angle AEF = 90°$ and $\angle CFD = 90°$. Find the area of the quadrilateral $ABCD$.




(A) 22.5 (B) $22.5\sqrt{2}$ (C) $18\sqrt{2}$ (D) 18

**ROUGH WORK**

# Answer Key

| Q | Answer | | Q | Answer |
|---|---|---|---|---|
| 1 | (A) 44 | | 9 | (C) |
| 2 | (D) 1800 | | 10 | (A) 18 |
| 3 | (C) 27 | | 11 | (B) 15 |
| 4 | (C) 50 | | 12 | (C) |
| 5 | (A) Tinu | | 13 | (B) 99 |
| 6 | (A) divisible by 2 | | 14 | (D) 3 |
| 7 | (D) 25 | | 15 | (A) 22.5 |
| 8 | (B) Figure (2) | | | |