

AOS

ASIAN OLYMPIAD SOCIETY

AMO

ASIAN MATHEMATICS OLYMPIAD 2020-2021

CLASS

9

INSTRUCTIONS AND INFORMATION FOR THE CANDIDATE

GENERAL

1. Do not open the booklet until told to do so by your teacher.
2. No calculators maths stencils, mobile phones or other calculating devices are permitted. Scribbling paper, graph paper, ruler and compasses are permitted, but are not essential.
3. Read the instructions on the answer sheet carefully. Ensure your name, school name and class are entered. It is your responsibility to correctly code your answer sheet.

THE ANSWER SHEET

1. Use an HB pencil or a Blue/Black ball point pen only to record your choice of answer in the Answer sheet.
2. Your answer sheet will be scanned. The optical scanner will attempt to read all markings even if they are in the wrong places, so please be careful not to write anything extra on the answer sheet.
3. If you want to change an answer or remove any marks, use a plastic eraser and be sure to remove all marks and smudges.
4. Fill your enrollment number clearly, improper enrollment number may lead to unavailability of result.
5. Please fill your Mobile Number clearly on the Answer Sheet, we will share your marks / result and other information related to AOS exams on your mobile number.
6. All questions are compulsory and there is no negative marking.
7. Return the ANSWER SHEET to the invigilator at the end of the exam.

INTEGRITY OF THE COMPETITION

The AOS reserves the right to re-examine students before deciding whether to grant official status to their score.

ENROLLMENT NUMBER : _____ CLASS : _____

STUDENT NAME : _____ Contact No : _____

1. A rectangular room is 84 m long and 36 m broad. It is to be paved with square tiles of same size. Find the minimum number of such tiles.
- a) 19 b) 20 c) 21 d) 22
2. $\frac{3+\sqrt{6}}{5\sqrt{3}-2\sqrt{12}-\sqrt{32}+\sqrt{50}}$ is equal to
- a) $3\sqrt{2}$ b) 3 c) 6 d) $\sqrt{3}$
3. 4ab5 is a four digit number divisible by 55 where a, b are unknown digits. Then b-a is :
- a) 1 b) 4 c) 5 d) 0
4. If A and B are acute angles such that $\cos (A+B) = \frac{1}{2} = \sin (A - B)$, find the values of A and B.
- a) $40^\circ, 45^\circ$ b) $30^\circ, 30^\circ$ c) $45^\circ, 15^\circ$ d) $35^\circ, 45^\circ$
5. The difference of the LCM and HCF of 210 and 55 is expressed as $210x + 55y$. What is the value of y^3 ?
- a) 1331 b) 3375 c) 55 d) 6859
6. Angle subtended in alternate segment by minor arc is :
- a) Acute angle b) Right angle c) Obtuse angle d) Straight angle
7. A positive integer N gives a remainder of 3 when divided by 5, which of the following numbers is divisible by 5?
- a) $N + 3$ b) $N - 2$ c) $5N + 3$ d) $2N + 4$
8. The angles of a triangle are in the ratio of 1:2:3, the triangle is
- a) An acute angled triangle b) an obtuse angled triangle c) an right angled triangle e) none of these
9. Find the sum of all natural number upto 1000, which are divisible by 4, but not by 8.
- a) 62500 b) 63400 c) 62820 d) 64200
10. A Cylinder circumscribes a sphere. Find the ratio of their volumes.
- a) 1 : 2 b) 3 : 2 c) 4 : 3 d) 5 : 6

11. If OA and OB are radii and PA and PB are tangents to the circle, which of the following is quadrilateral OAPB?
a) Rectangle b) square c) Parallelogram d) Kite
12. ABC is a right angled triangle with angle B = 90° . Then orthocenter of triangle will lie
a) Inside the triangle b) outside the triangle c) at midpoint of BC d) at B
13. Each interior angle of a regular polygon is 144° . Find the interior angle of a regular polygon which has double the number of sides as the first polygon.
a) 1220 b) 1620 c) 1600 d) 1520
14. How many acute-angled triangles are possible if its sides are 12 cm, 17 cm and x cm, where x is any positive integer?
a) 4 b) 7 c) 9 d) 12
15. What is the value of $(13 + 23 + 33 + \dots + 153) - (1 + 2 + 3 + \dots + 15)$?
a) 14280 b) 14200 c) 12480 d) 13480

Answer key

1 - c	2 - d	3 - a	4 - c	5 - d	6 - c	7 - d	8 - c	9 - a	10 - b	11 - d	12 - d	13 - b	14 - c	15 - a
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