

AOS

ASIAN OLYMPIAD SOCIETY

AMO

ASIAN MATHEMATICS OLYMPIAD 2020-2021

CLASS

7

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. The difference between two numbers is 5 and the difference between their squares is 65. Find the larger number.

- a) 9 b) 10 c) 11 d) 12

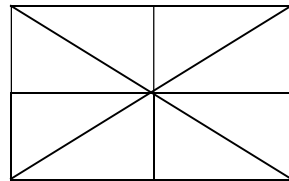
2. Find the set that is closed under subtraction.

- a) Positive integers b) integers c) whole numbers d) negative integers

3. The sum of three numbers is 27 and their product is 405. Find the biggest number.

- a) 15 b) 16 c) 17 d) 18

4. How many triangles are there in the given figure?



- a) 24 b) 20 c) 12 d) 16

5. The sum of three numbers is 75. The ratio of first two numbers is 3 : 5 and of last two numbers is 5 : 7. Find the greatest number.

- a) 53 b) 35 c) 7 d) 21

6. The average of ten different positive integers is 10. The smallest is 5. The biggest of these number can be

- a) 55 b) 49 c) 25 d) 19

7. Denominators of terminating rational numbers can have which of the following as prime factors?

- a) 2 b) 5 c) 2 and 5 d) 3 and 7

8. There is a 16 litre mixture of milk and water. The ratio of milk to water is 5:3. How much more milk should be added to the mixture to make the ratio of milk to water equal to 2 : 1?

- a) 1/3 litre b) 1 litre c) 2 litres d) 10 litres

9. How soon after 12 o'clock will the hands of a clock be together again?

- a) 1 hour b) 1 hour 5 minutes c) 1 hour 10 minutes d) 1 hour $5\frac{5}{11}$ minutes

10. In a class, 20 opted for Physics, 17 for Maths, 5 for both and 10 for other subjects. The class contains how many students?
a) 35 b) 42 c) 52 d) 60
11. Which of the following may lie outside or on the triangle?
a) Circumcentre b) Centroid c) Incentre d) none of these
12. Three chairs and two tables cost Rs.1850. five chairs and three tables cost Rs.2850. find the total cost of one chair and one table.
a) Rs.800 b) Rs. 850 c) Rs.900 d) Rs.950
13. There are some students in the two examination halls A and B. to make the number of students equal in each hall, 10 students are sent from A to B. but if 20 students are sent from B to A, the number of students in A becomes four times of the number of students in B. find the number of students in the two halls.
a) 120 b) 180 c) 100 d) 200
14. A sum of money becomes five times at simple interest rate of 8% per annum. At what rate percent will it become seven times?
a) 11% b) 12% c) 15% d) 13%
15. A triangle can have
a) Two obtuse angles b) all angles less than 60° c) three acute angles d) only one acute angle

Answer key

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