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VIII/MATHS/2017-18
OLYMPIAD PRACTICE WORKSHEET

(Concept based)

1. The height of a rectangle in a histogram shows the

- (A) Upper limit of the class (B) lower limit of the class
(C) Width of the class (D) Frequency of the class

2. A number which can be expressed as p/q where p and q are integers and q is not equal to zero is ____

- (A) natural number (B) whole number (C) integers (D) rational number

3. The value of $3^5 \div 3^{-6}$ is _____

- (A) 3^5 (B) 3^{-6} (C) 3^{11} (D) 3^{-11}

4. A number ending in 9 will have the unit place of its square as _____

- (A) 3 (B) 9 (C) 1 (D) 6

5. The size of the class interval in the below case is _____

200-220	220-240	240-260	260-280
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- (A) 35 (B) 20 (C) 28 (D) 30

6. For a non-zero rational number z , $(z^{-2})^3$ is equal to

- (A) z^6 (B) z^{-6} (C) z^1 (D) z^4

(Application based)

7. If sum of two angles of a quadrilateral is 200° and other two angles are equal. The value of equal angles is _____

- (A) 150° (B) 135° (C) 80° (D) 75°

8. Using Euler's formula, values of X and Y are

Faces	6	5	20	14
Vertices	X	Y	36	21
Edges	12	9	54	36

- (A) $X=8, Y=6$ (B) $X=6, Y=8$ (C) $X=18, Y=16$ (D) $X=10, Y=8$

9. Listed below are the temperatures in $^\circ\text{C}$ for 10 days

-6, -8, 0, 3, 2, 0, 1, 5, 4, 4

What is the Range of the data?

- (A) 8°C (B) 13°C (C) 10°C (D) 12°C

10. The reciprocal of $-3/8 \times (-7/13)$ is

(A) 104/21 (B) -104/21 (C) 21/104 (D) -21/104

11. In a blue print of a room, an architect has shown the height of the room as 33 cm. If the actual height of the room is 330 cm, then the scale used by her is _____

(A) 1:11 (B) 1:10 (C) 1:100 (D) 1:3

(HOTS)

12. Given that $\sqrt{4096} = 64$, the value of $\sqrt{4096} + \sqrt{40.96}$ is _____

(A) 74 (B) 60.4 (C) 64.4 (D) 70.4

13. When a number is divided by 125, the remainder is 82, when the same number is divided by 25, the remainder will be _____?

(A) 8 (B) 9 (C) 6 (D) 7

14. The length and breadth of a hall are 21.75 m and 11.25 m, respectively. How many tiles are required to pave the floor of the hall if square tiles of side 0.75 m are used?

(A) 435 Tiles (B) 470 Tiles (C) 370 Tiles (D) 335 Tiles

(Value based)

15. The runs scored by 11 players of a cricket team during a cricket match are as follows:

51, 63, 20, 0, 47, 81, 30, 40, 72, 3, 0

Find the average runs.

(A) 40 Runs (B) 39 Runs (C) 35 Runs (D) 37 Runs

16. How many cubes of a side 2cm can be packed in a cubical box with inner side equal to 4cm?

(A) 9cubes (B) 10cubes (C) 8cubes (D) 7cubes

(Logical Reasoning)

17. Mr. 'X' shows three photographs to Mr. 'Y', Pointing towards photograph 1, he says "The person in the photograph 1 is my uncle who says 'Uncle' to the person in photograph 2, and the person in photograph 3 is called 'uncle' by the person in photograph 2" How is Mr. 'X' related to the person in photograph 2?

(A) Grand Son (B) Grand Daughter (C) Great Grand Son (D) None of these

18. If the alphabets are written in the reverse order after interchanging from 'D to L' with those from 'R to Z' respectively, which letter would be midway between W and E in the new order?

(A) Z (B) N (C) D (D) None of these

19. Three of the following four numbers are alike in a certain way and so form a group. Which of the following does not belong to the group?

(A) 143 (B) 399 (C) 759 (D) 257

20. In a code language, each of the vowels, i.e., A, E, I, O and U, is substituted by the letter preceding it, while a consonant is substituted by the nearest vowel. How can the word EVIDENCE be written in that code?

(A) DUHJEDOED (B) DUHEDUAD (C) DUJEDOAD (D) DUJEDOAD OR DUHJEDOED