

International Olympiad of Mathematics



CLASS : 9 SAMPLE QUESTIONS

The Actual Question Paper Contains 40 Questions. The Duration of the Test Paper is 50 Minutes.

1. If P and Q are two polynomials of degree 5 and 4, respectively, then find the degree of P – Q.
 (A) 1 (B) 5
 (C) 4 (D) Cannot be determined

2. If $A = \sqrt{13} - \sqrt{5}$ and $B = \sqrt{17} - \sqrt{13}$, then ____.

(A) $A > B$ (B) $B > A$ (C) $A = B$ (D) $A < 2B$

3. If $\frac{2^{3n}}{64} + \frac{27}{4} \cdot 2^n + \frac{9 \cdot 2^{2n}}{16} = 6832$, then find the value of n.

(A) 3 (B) 4 (C) 5 (D) 6

4. In a triangle, the average of any two sides is 36 cm more than half of the third side. The area of the triangle (in sq cm) is ____.

(A) $1028\sqrt{3}$ (B) $1296\sqrt{3}$
 (C) $1018\sqrt{3}$ (D) $1024\sqrt{3}$

5. The following observations are arranged in ascending order:

36, 39, 45, 48, x, x + 4, 57, 62, 65, 68

If the median is 52, then the mean of the observations is ____.

(A) 52.4 (B) 50.6 (C) 51.8 (D) 51.2

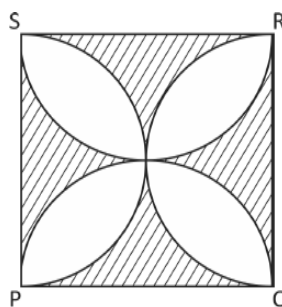
6. Two coins are tossed 1000 times and the outcomes are recorded as given below:

Number of Tails	0	1	2
Frequency	320	352	328

Based on this information, the probability of getting at least 1 head is ____.

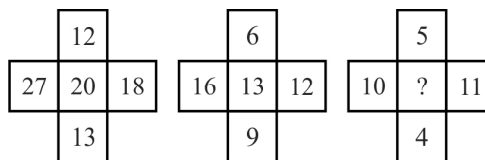
(A) $\frac{84}{125}$ (B) $\frac{17}{25}$ (C) $\frac{81}{125}$ (D) $\frac{44}{125}$

7. Find the area of the shaded region where PQRS is a square of side 20 cm. [Take $\pi = 3.14$]



(A) 175 cm^2 (B) 174 cm^2
 (C) 173 cm^2 (D) 172 cm^2

8. What will come in place of the question mark (?) in the following pattern?



(A) 9 (B) 12
 (C) 8 (D) 13

9. In a certain code language, 'come now' is written as 'ha na', 'now and then' is written as 'pa da na' and 'go then' is written as 'sa pa'. How is 'and' written in that code language?

(A) sa (B) pa (C) na (D) da

10. The value of

$$\frac{4}{1 + 2\log_a 2b^2c} + \frac{4}{1 + 2\log_a 2c^2b} + \frac{4}{1 + 2\log_b 2c^2a}$$

is equal to ____.

(A) 2 (B) 4 (C) 6 (D) 8

ANSWERS

1. (B) 2. (A) 3. (D) 4. (B) 5. (A) 6. (A) 7. (D) 8. (B) 9. (D) 10. (D)