12th iOM' 19
International Olympiad of Mathematics
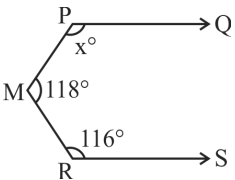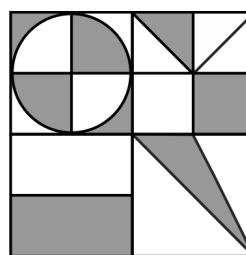
CLASS : 7 SAMPLE QUESTIONS

The Actual Question Paper Contains 50 Questions. The Duration of the Test Paper is 60 Minutes.

1. The product of the given 11 fractions is:

$$\left(1-\frac{1}{3}\right)\left(1-\frac{1}{4}\right)\left(1-\frac{1}{5}\right)\left(1-\frac{1}{6}\right)\ldots\ldots\ldots\left(1-\frac{1}{13}\right)$$

(A) $\dfrac{1}{13}$ (B) $\dfrac{16}{13}$ (C) $\dfrac{2}{13}$ (D) $\dfrac{12}{13}$

2. What is the least number which when divided by 6, 9, 11 and 12 leaves remainder 5 in each case?

(A) 401 (B) 391 (C) 396 (D) 408

3. The value of $\dfrac{100^{97} + 100^{100}}{100^{97}} - 1$ is equal to:

(A) 10^5 (B) 10^6 (C) 10^8 (D) 10^4

4. If $x^2 + \dfrac{1}{x^2} = 6$, the value of $\left(x - \dfrac{1}{x}\right)$ is:

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

5. A student has to secure 33% marks to pass. He got 349 marks and failed by 47 marks. Find the maximum marks to be scored.

(A) 1000 (B) 1200 (C) 1500 (D) 800

6. In the given figure, it is given that PQ || RS, $\angle$ MRS = 116° and $\angle$ PMR = 118°. Determine the value of x.

(A) 124 (B) 126 (C) 122 (D) 128

7. If A = {1, 5, 6, 7, 8, 10} and B = {2, 4, 6, 8}, then which one of the following statements is incorrect?

(A) $A \cup B = \{1, 2, 4, 5, 6, 7, 8, 10\}$

(B) $A \cap B = \{6, 8\}$

(C) $A - B = \{1, 5, 7, 10\}$

(D) $B - A = \{1, 2, 4, 10\}$

8. Find the reciprocal of the fraction represented by the shaded parts in the given figure.
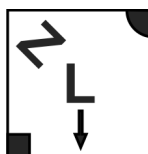

(A) $\dfrac{32}{9}$ (B) $\dfrac{32}{11}$ (C) $\dfrac{32}{13}$ (D) $\dfrac{96}{41}$

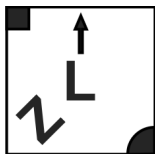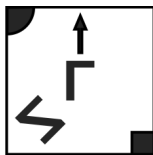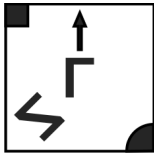**9.** Which one of the following numbers will replace the question mark (?) in the number series given below?
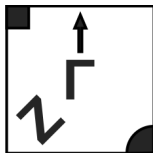
102, 96, 89, 81, 72, $\overset{?}{\underline{\quad}}$, 51

(A) 63 (B) 61 (C) 60 (D) 62

10. Find the water image of the given figure.

(A)   (B)

(C)   (D)

ANSWERS

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