

# International Maths Wizard Olympiad (IMWO)

## CLASS-10 SAMPLE QUESTION PAPER

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

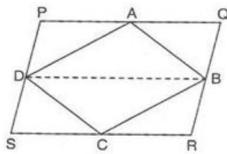


**CPS OLYMPIADS**  
COMPETITION PROMOTION SOCIETY

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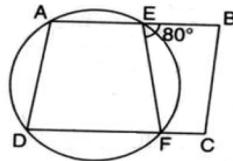
1. A, B, C, D are mid-points of sides of parallelogram PQRS. If  $\text{ar}(PQRS) = 36 \text{ cm}^2$ , then  $\text{ar}(ABCD)$  is:

- (A)  $36 \text{ cm}^2$   
(B)  $30 \text{ cm}^2$   
(C)  $24 \text{ cm}^2$   
(D) All of these  
(E) None of these



2. ABCD is a parallelogram. A circle passes through A and D and cuts AB at E and DC at F. If  $\angle BEF = 80^\circ$ , then  $\angle ABC$  is equal to

- (A)  $75^\circ$   
(B)  $100^\circ$   
(C)  $120^\circ$   
(D) All of these  
(E) None of these



3. For drawing a frequency polygon of a continuous frequency distribution, we plot the points whose ordinates are the frequency of respective classes and abscissa are respectively

- (A) Upper limits of the classes  
(B) Class marks of the classes  
(C) Upper limits of preceding classes  
(D) Lower limits of the classes  
(E) None of these

4. The value of  $\tan(-150^\circ)$  is:

- (A)  $-\sqrt{3}$  (B)  $\frac{1}{\sqrt{3}}$   
(C)  $-\frac{1}{\sqrt{3}}$  (D)  $\sqrt{3}$   
(E) None of these

5. If  $\tan \theta + \cot \theta = \sqrt{3}$  then the value of  $\tan^2 \theta + \cot^2 \theta$  will be:

- (A) 5 (B) 3  
(C) 2 (D) 1  
(E) None of these

6. The points  $(a, a), (-a\sqrt{3}, a\sqrt{3}), (-a, -a)$  are the vertices of:

- (A) An isosceles triangle  
(B) an equilateral triangle  
(C) a right angled triangle  
(D) a scalene triangle  
(E) None of these

7. Cube root of 970299 is equal to

- (A) 182 (B) 98  
(C) 99 (D) 171  
(E) None of these

8. Find the missing number in the following series:

1, 9, 3, 7, 5, 5, 7, 3, 9, \_\_\_\_, 11

- (A) 1 (B) 10  
(C) 4 (D) 5  
(E) None of these

9. If  $a = \sqrt{2}$ ,  $b = \sqrt[3]{4}$ ,  $c = \sqrt[4]{6}$  then the ascending order will be:

- (A) a, b, c (B) b, c, a  
(C) a, c, b (D) All of these  
(E) None of these

10. If  $2^a + 3^b = 43$  and  $2^{a+3} - 3^{b+1} = 47$  then the respective values of "a" and "b" are:

- (A) 4, 3  
(B) 3, 4  
(C) 16, 27  
(D) 8, 9  
(E) None of these