

# 9<sup>th</sup> iOM'16

## International Olympiad of Mathematics



Presented by:  
**SILVERZONE**  
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 Organized by :  
**Mathematics Olympiad**  
**Foundation**  
 New Delhi, India  
 For supremacy in Mathematics  
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### CLASS : 7 (SYLLABUS & SAMPLE QUESTIONS)

Number System and Its Operations, Fractions and Decimals, Rational Numbers, Exponents & powers, Algebraic Expression, Linear Equation, Percentage, Profit and Loss, Simple and Compound Interest Data Handling, Mensuration, Line, Angles and Triangles, Ratio and Proportion, Applied Mathematics, Mathematical Reasoning, Mental Aptitude

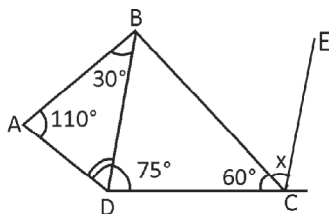
The Actual Question Paper Contains 50 Questions. The Duration of the Test Paper is 60 Minutes.

1. If  $47.2506 = 4A + \frac{7}{B} + 2C + \frac{5}{D} + 6E$ , then the

value of  $5A + 3B + 6C + D + 3E$  is

- (A) 53.6003  
 (B) 53.603  
 (C) 153.6003  
 (D) 213.0003  
 (E) None of these
2. The present ages of Peter & Jony are in the ratio of 4 : 3, four years later, their ages will be in the ratio of 6 : 5. What is their present ages?
- (A) 8 and 9 years (B) 6 and 9 years  
 (C) 8 and 6 years (D) 5 and 9 years  
 (E) None of these

3. If CE is parallel to DB in the given figure then value of x will be \_\_\_\_\_.

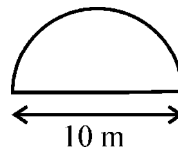


- (A)  $45^\circ$  (B)  $75^\circ$

- (C)  $30^\circ$  (D)  $85^\circ$   
 (E) None of these

4. The compound interest on a sum for 2 years at 12% per annum is ₹ 510. What would the simple interest on the same sum at the same rate for the same period.
- (A) ₹ 400  
 (B) ₹ 450  
 (C) ₹ 460  
 (D) ₹ 481.13  
 (E) None of these

5. Find the perimeter of the following figure which is a semicircle including its diameter. (Take  $\pi = 3.147$ )

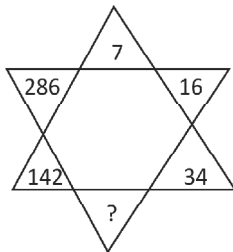


- (A) 25 m  
 (B) 20 m  
 (C) 25.7 m  
 (D) 20.7 m  
 (E) None of these

6. Radii of two concentric circles are 4 cm and 3 cm respectively. Find the area enclosed between two circles.  
 (A)  $98 \text{ cm}^2$  (B)  $199 \text{ cm}^2$   
 (C)  $22 \text{ cm}^2$  (D)  $99 \text{ cm}^2$   
 (E) None of these

7. Sofia started walking straight towards South. She walked a distance of 15 m and then took a left turn and walked a distance of 30 m. Then she took a right turn and walked a distance of 15 m again. Sofia is facing in which direction?  
 (A) North - East (B) South  
 (C) North (D) South - West  
 (E) None of these

8. Find the number at the place of question mark.

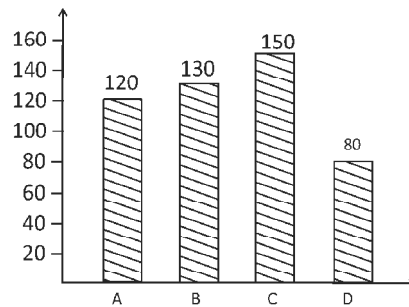


- (A) 72 (B) 70  
 (C) 68 (D) 66  
 (E) None of these

9. Find the value of  $x$  so that  $2^{2x+1} = 4^{2x-1}$ .

- (A)  $\frac{3}{2}$  (B) 1  
 (C) 2 (D)  $\frac{1}{2}$   
 (E) None of these

10. The graph given below represents the population (in lakhs) of some cities. Which city has minimum population?



- (A) A  
 (B) B  
 (C) C  
 (D) D  
 (E) None of these

ANSWERS

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