

# 10<sup>th</sup> iOM'17

## International Olympiad of Mathematics



Presented by:  
**SILVER  
ZONE  
FOUNDATION**  
NEW DELHI - INDIA

Organized by:  
**Mathematics Olympiad  
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New Delhi, India

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### CLASS : 7 (SYLLABUS & SAMPLE QUESTIONS)

Number Systems and 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, Reasoning & Aptitude.

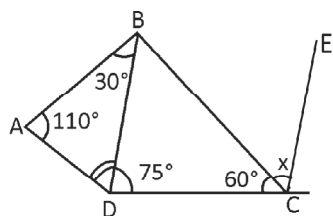
*The Actual Question Paper Contains 50 Questions. The Duration of the Test Paper is 60 Minutes.*

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 \_\_\_\_\_.



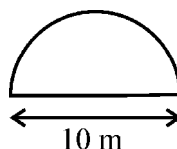
- (A) 45° (B) 75°

- (C) 30° (D) 85°  
(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  $\pi = 3.147$ )

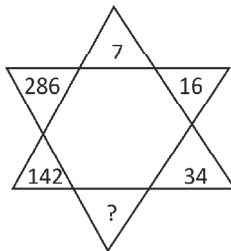


- (A) 25 m  
(B) 20 m  
(C) 25.7 m  
(D) 20.7 m  
(E) None of these

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.

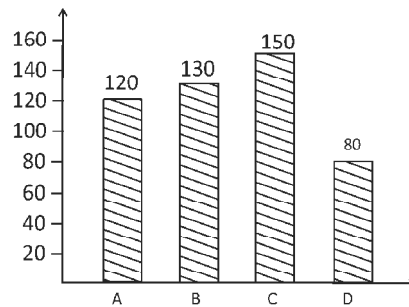


- (A) 72 (B) 70  
 (C) 68 (D) 66  
 (E) None of these

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)