

CLASS

5

SAMPLE PAPER

Science  
 Olympiad  
Foundation

For Excellence in Science, Maths & IT

## INTERNATIONAL MATHEMATICS OLYMPIAD

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The actual test paper has 50 questions. Time allowed : 60 minutes. There are 3 sections, 20 questions in section I, 20 in section II and 10 in section III.

**Section I** : Logical Reasoning, **Section II** : Mathematical Reasoning &

**Section III** : Everyday Mathematics

### SYLLABUS

7 and 8 digit Numbers, Rounding off, Roman Numbers, Addition, Subtraction, Multiplication, Division, Factors and Multiples, Rules of divisibility, Prime and composite numbers, Fractions, Decimals, Basics geometry, Circles, Symmetry, Measurement of Length, Mass, Capacity, Perimeter and Area of rectangle and Square, Measurement of Volume, Temperature, Time and various operations on time, Relationship between Seconds, Minutes and Hours, Money, Representation of data in Pictorial Form, Patterns Formation of Numbers and Figures.

1. The table shows the number of toys a factory made in March and April. How many more toys did the factory make in March than in April

Toys Made at a Factory	
Month	Number Made
March	962,458
April	879,581

- (A) 117,123 (B) 82,977  
(C) 82,877 (D) 117,137  
(E) None of the above.

2. Harry had 500 coins in a jar. He sorted the coins into 25 different stack. Each stack had the same number of coins. How many coins were in each stack?

- (A) 20 (B) 45 (C) 25 (D) 12 (E) None of these.

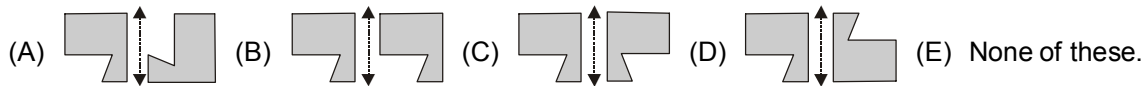
3. There are 914 students enrolled in Lakeview Elementary School. Frederick Elementary School has 276 fewer students enrolled. How many students are enrolled at Frederick Elementary School?

- (A) 642 (B) 762 (C) 1,190 (D) 638 (E) None of these.

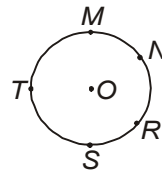
4. How is 4.026 written in words?

- (A) Four and twenty-six thousandths (B) Four and twenty-six hundredths  
(C) Four thousand, twenty-six (D) Four hundred twenty-six (E) None of these.

5. Which of the following shows a reflection (flip) of the shaded shape across the heavy dotted line?



6. In the figure, point O is the center of the circle. Which two points appear to make a diameter when connected with a straight line?

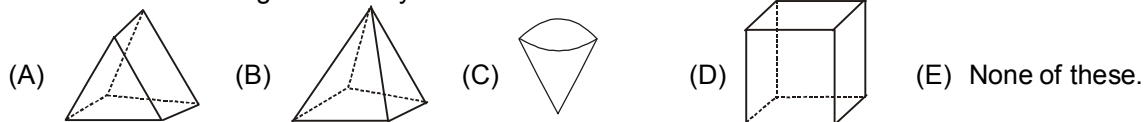


- (A) M and S (B) O and R (C) N and S  
(D) T and R (E) None of these.

7. Which unit could be used for measuring the amount of liquid needed to fill a small teacup?

- (A) Gram (B) Kg (C) Meter (D) Milliliter (E) None of these.

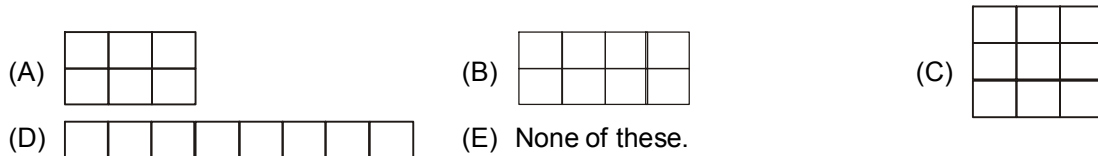
8. Which of the following has exactly 6 vertices?



9.     Which figure is quadrilateral?

- (A) Figure T (B) Figure S (C) Figure X (D) Figure W (E) None of these.

10. Which figure has an area of 8 and a perimeter of 12? Each square block is of side 1 unit.



11. Tom left home at 7 : 15 a.m. to go to work. He returned home at 4 : 45 p.m. What is the total amount of time Tom was away from home?

- (A) 7 hours, 30 minutes (B) 9 hours, 30 minutes  
(C) 3 hours, 30 minutes (D) 8 hours, 30 minutes (E) None of these.

12. A rule was used to make the pattern shown below.

51, 45, 39, 33, 27, 21 . . .

Which could be the rule used to make the pattern?

- (A) Divide by 7 (B) Divide by 6 (C) Subtract 7 (D) Subtract 6 (E) None of these.

13. Which of these could be solved by using the open sentence  $S - 7 = ?$

- (A) Rita collected 7 more seashells than Henry. If S is the number of seashells that Henry collected,

- how many did Rita Collect ?
- (B) Bony collected 7 fewer seashells than Kamal. If S is the number of seashells Kamal collected, how many did Bony collect ?
- (C) David needs 7 seashells more to complete his collection. If S is the number of seashells he has so far, how many will he have after he gets 7 more ?
- (D) Amity filled 7 boxes with seashells. If S is the number of seashells she put in each box, how many seashells did she use in all ?
- (E) None of the above.

14. An optometrist uses the symbol below as a tool during an eye exam. Which figure would result when the symbol is flipped over the dotted line?



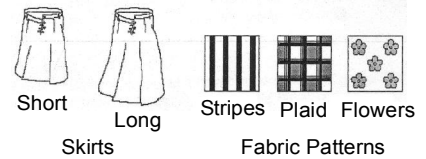
- (A) (B) (C) (D) (E) None of these.

15. Simon and Julie need 72 paper flowers to complete a bulletin board. They have 19 paper flowers so far. Which operation should be used in the box below to find how many more paper flowers they need?

$$72 \boxed{?} 19 =$$

- (A) addition (B) division (C) multiplication (D) subtraction (E) None of these.

16. Shelley is ordering a skirt from a catalog. She can choose one of two lengths: a short skirt or a long skirt. Then she can choose one of three fabric patterns: stripes, plaid, or flowers. How many different skirts could Shelley order choosing a length and a fabric pattern?

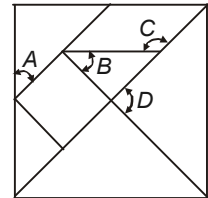


- (A) 2 (B) 3 (C) 5 (D) 6 (E) None of these.

17. There are about 20 times as many species of ants as there are species of bats. Let b represents the number of species of bats. Which expression represents the number of species of ants?

- (A)  $b + 20$  (B)  $b \div 20$  (C)  $20 \times b$  (D)  $20 \div b$  (E) None of these.

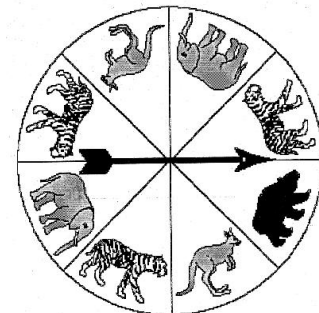
18. A tangram is an ancient Chinese puzzle. It is made of seven pieces that fit together to make a square. Which of the angles marked in the tangram puzzle above is an obtuse angle?



- (A) Angle A (B) Angle B  
(C) Angle C (D) Angle D  
(E) None of the above

19. The picture below shows a spinner for an animal board game. In which animal section is spinner least likely to land?

- (A) (B)   
(C) (D)   
(E) None of the above.



20. The following table shows the distance around four different planets.

Which planet's distance has the numeral 3 in the ten-thousands place?

- (A) Jupiter (B) Mars  
(C) Mercury (D) Neptune  
(E) None of the above.

DISTANCE AROUND

Planet	Distance Around (in miles)
Jupiter	88,732
Mars	4,213
Mercury	3,032
Neptune	30,603

**ANSWER KEY**

1. (C) 2. (A) 3. (D) 4. (A) 5. (C) 6. (A) 7. (D) 8. (A) 9. (C) 10. (B)  
11. (B) 12. (D) 13. (B) 14. (A) 15. (D) 16. (D) 17. (C) 18. (C) 19. (A) 20. (D)