Olympiad Foundation

SAMPLE PAPER CLASS-7th

OLYMPIAD FOUNDATION

MATHEMATIC OLYMPIAD

Division of Marks

S.No.	Topic/Section	No. of Question	Marks
1	MATHEMATICS	25	25
2	HOTS (High Order thinking Skill)	10	10
3	Reasoning & Mental Ability	15	15
	Total	50	50

INSTRUCTIONS :

1. Use Blue/Black ballpoint pen only to darken the appropriate circle.
2. Mark should be dark and should completely fill the circle.
3. Dark only one circle for each entry.
4. Dark the circle in the space provided only.
5. Rough work must not be done on the answer sheet and do not use white -fluid or any other rubbing material on Answer sheet.
6. Each question carries one mark.

TIME: 1 Hour **M.M.: 50**

Select the correct answer and darken your answer in the table :

MATHEMATICS

1. Simplify
   $14 - [3 + 15 \{ 15 \times 3 - 2 (13 - 25)\}]$

   (A) 1024 (B) 7546

   (C) 1038 (D) -1038

2. Stephen has a pillar such that 7/8 m of it is yellow, 12/24 m of it's green and $3\frac{1}{2}$ m of it's white. find the length of the pillar

   (A) 4 (B) $4\frac{7}{24}$

   (C) $5\frac{4}{3}$ (D) $8\frac{2}{9}$

3. The ratio of copper and zinc in an alloy is 8 : 7, if the weight of the copper in the alloy is 1. 12 kg, the weight of zinc it's

   (A) 9.8 kg (B) 0.98 kg

   (C) 0.97 kg (D) 1.26 kg

4. The smallest possible decimal fraction upto three decimal place is :

   (A) 0.001 (B) 0.011 (C) 0.101 (D) All of these

5. Which one of the following rational number is in standard form?
   2/-5, 3/-4, -5/7, -7/-8

   (A) 2/-5 (B) -5/7

   (C) 3/-4 (D) -7/-8

6. Simplify : $(4)^3 + (3)^2$

   (A) -125 (B) 73

   (C) 73 (D) None of these

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7. Find the value of $a^3 + b^3 + c^3 - 3abc$, if a = 1, b = 2, c = -1

(A) 4 (B) 1

(C) 7 (D) 2

8. Find the solution of the equaion X + 4 = 5x - 8

(A) X = 4 (B) X = -2

(C) X = 5 (D) X = -9

9. Amit is 46 years old the is 4 years older than thrice his son age. Find the age of his son.

(A) 16 years (B) 14 years

(C) 10 years (D) 9 years

10. Dipa wants to divide 1530 Rs. between David and meena in the ratio 8:9, find the amount received by David.

(A) 720 Rs. (B) 800 Rs.

(C) 900 Rs. (D) 1000 Rs.

11. If a : b = 1 : 5 find the ratio 4a + 3b + 2b.

(A) 9 : 5 (B) 12 : 13

(C) 10 : 15 (D) 19 : 15

12. A mobile phone is sold for Rs. 576 at the loss of 4%. What will be the gain or loss percentage, if it is sold for Rs. 640 ?

(A) Gain of $6\frac{7}{8}$ % (B) Gain of 1/2%

(C) Loss of 2% (D) Loss of 5%

13. Find the simplest interest on Rs. 5000 for 2 years at 8% per annum.

(A) Rs. 850 (B) Rs. 900

(C) Rs. 800 (D) Rs. 950

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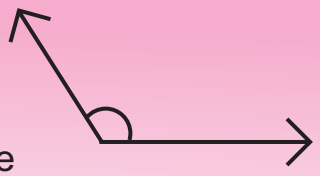
15. Give the name of this angle :



(A) Acute angle (B) Right angle

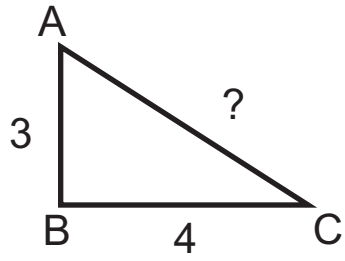
(C) Obtuse angle (D) None of these

16. Find the value of x in this figure :

(A) 45° (B) 90°

(C) 40° (D) 60°

17. In a right angle triangle AB = 3, BC = 4 then AC ?



(A) 3 Unit (B) 4 Unit

(C) 5 Unit (D) 6 Unit

18. Find the area of a triangle whose sides are 15 cm, 25 cm and 13 cm.

(A) 78.59 cm^2 (B) 100 cm^2

(C) 20 78.56 cm^2 (D) None of these

19. 8x4 + 14x3 + 2x2 + 7x-8 divided by 4x2 + 3x - gives remainder as

(A) 0 (B) 14x

(C) 14x - 10 (D) 14x + 10

20. The market price of a machine is Rs. 9700 and VAT is 6%. The S.P. of machine

(A) 10000 (B) 9872

(C) 10282 (D) 9527

21. Find the area of unshaded portion :

(A) 32 cm^2 (B) 19.44 cm^2

(C) 21.26 cm^2 (D) 18.36 cm^2

22. Find the multiplicative inverse of $(7x1/2)^{-1}$

(A) $7^{-1} \times 12^{-1}$ (B) $7^{-1} \times 12$

(C) 7×12^{-1} (D) None of these

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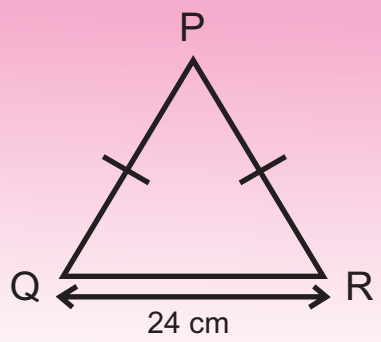
23. In the following figure the base of an isosceles triangle is equal to 24 cm and its area is 192 cm^2. Then the perimeter of the triangle is :



(A) 64 cm (B) 63 cm

(C) 62 cm (D) 61 cm

24. The sum of the digit of a two digit number is 10. If the order of of digit is reversed, the number is decrease by 54. Find the number.?

(A) 73 (B) 82

(C) 91 (D) 64

25. If a- = 5, then the value of a3 - 1/a3 is :

(A) 142 (B) 140

(C) 172 (D) 125

26. The ratio of income to the saving of a family is 8 : 3, if monthly income is 24,000 Rs. Find the monthly expenses?

(A) 15000 (B) 9000

(C) 6000 (D) 7000

27. Find the cube of X-2Y?

(A) $x^3 + 8y^3 + 6x^2y - 12x^y2$ (B) $x^3 - 8y^3 - 6\ x^2y + 12xy^2$

(C) $x^2 + 87\ y^3 + 7xy - 7xy$ (D) $7xy^3 + 6x - 74x2y - 2xy$

28. What least value must be given to A so that the number 5087A56 is divisible by 8?

(A) 8 (B) 7

(C) 5 (D) 6

29. 15 boys earn 900 Rs. in 5 days. How much will 20 boys earn in 7 days?

(A) 720 Rs. (B) 1680 Rs.

(C) 1280 Rs. (D) 1880 Rs.

30. The area of triangle whose sides are 3 cm

(A) 4 cm^2 (B) 6 cm^2

(C) 14 cm^2 (D) 18 cm^2

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31. Simplify and write in the exponential form $(-5)^7 \times (-5)^4$

(A) $(-5)^1$ (B) 10^7

(C) 5^4 (D) 8^4

32. Solve the equation : 28 = 4 + 3 (t + 5)

(A) T = 2 (B) T = 3

(C) T = 5 (D) T = 4

33. A bicycle costs 2400 Rs. and is sold by the shopkeeper for 2880. Calculate the profit percentage?

(A) 10% (B) 9%

(C) 20% (D) 100%

34. The difference in the measure of two complementary angle is 22. Find the angles :

(A) 20° & 60 (B) 34° & 56°

(C) 40° & 50° (D) 56° & 60°

35. Find the value of 3x2 + 7x, if x = 3

(A) 48 (B) 49

(C) 50 (D) 60

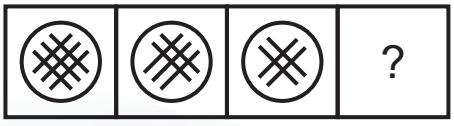
REASONING AND MENTAL ABILITY

36. Choose the missing term to complete the given series :
3, 5, 10, 12, 24, 26, 52

(A) 104 (B) 102

(C) 54 (D) 50

37. Choose the missing figure from the options :



(A) 

(B) 

(C) 

(D) 

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38. Find the next term in the given series :
PMT, OOQ, NQN, MSK, ?

(A) LWI (B) LVH

(C) LVI (D) LUH

39. If the code for JOT is OTY, then what is the code for HIS?

(A) PQZ (B) LMY

(C) IQP (D) MNX

40. A and B are children of D. Who is the father of A?
(a) C is brother of A and Son of E, (2) F is the mother of B.

(A) 1 (B) 2

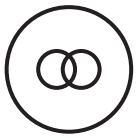
(C) 1 or 2 (D) 1 and 2Q3.

41. A watch reads 4:30. If the minute hand point east, then in what direction will the hour hand point ?

(A) North-East (B) South-West

(C) North (D) South

42. Which of the following figures represents the relation between parrots, birds and crows?

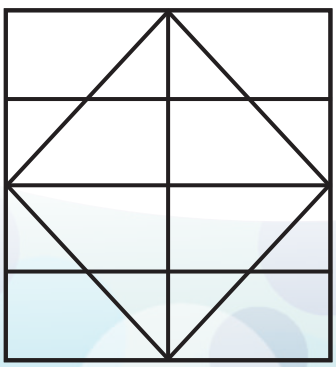
(A) 

(B) 

(C) 

(D) 

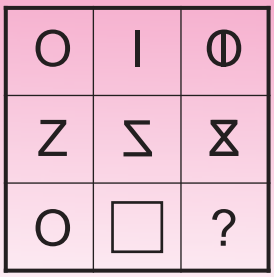
43. Find the number of triangle in the given figure.

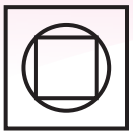


(A) 22 (B) 18

(C) 20 (D) 24

44. Find out which figure in given option completes the figure matrix



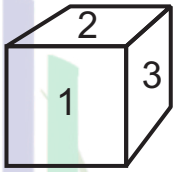
(A) 

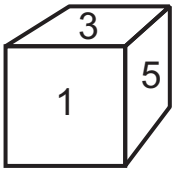
(B) 

(C) 

(D) 

45. Study the two position of a dice given below. What number will be opposite to the face bearing number 2 ?





(A) 4

(B) 3

(C) 6

(D) 5

47. P is 600 km eastward of O and Q 800 km north of Q. R is exactly in the middle of Q and P. The distance between Q and R is

(A) 1000 km

(B) 400 km

(C) 500 kn

(D) 300 km

48. Pointing to A, B said, " I am the only son of one of the sons of his father. How is A related to B

(A) Nephew

(B) Father or uncle

(C) Uncle

(D) Father

49. Select its correct mirror images : BUZZER

(A) 

(B) 

(C) 

(D) 

50. Choose the odd one out :

(A) Goat

(B) Cow

(C) Dog

(D) Crow

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ANSWER KEY

1	C	11	D	21	B	31	A	41	A
2	A	12	A	22	B	32	B	42	B
3	B	13	A	23	A	33	C	43	A
4	A	14	C	24	D	34	B	44	A
5	D	15	B	25	B	35	A	45	D
6	B	16	A	26	A	36	C	46	B
7	C	17	C	27	B	37	D	47	B
8	A	18	C	28	A	38	D	48	C
9	B	19	C	29	C	39	D	49	A
10	A	20	B	30	B	40	B	50	D

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