UIMO
Unified International Mathematics Olympiad

UNIFIED INTERNATIONAL MATHEMATICS OLYMPIAD

CLASS - 4
Question Paper Code : *4O109*

KEY

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

SOLUTIONS

MATHEMATICS

01. (D)   A = 0, B = 0, A + B = 0

02. (A) $\frac{1}{9}, \frac{1}{7}, \frac{1}{5}, \frac{1}{3}$ are unit fraction & the value increases as the denominator decreases.

03. (C)   (A) $28 \div 7 = 4 \neq 10 - 3 = 7$

        (B) $6 \times 3 = 18 \neq 100 \div 6$

        (C) $400 + 8 = 408 = 614 - 206 = 408$

        (D) $4 \times 5 = 20 \neq 4 + 5 = 9$

04. (B)   Divided = (Division × Quotient) + Remainder

1954 = (Division × Quotient) + 4

(Division × Quotient)

= 1954 − 4 = 1950

from options

(A)   5 × 500 = 2500

(B)   5 × 390 = 1950

5 is P & Q − 390 Respectively

05. (D) 1:00 – 50 min = 12:10

12:10 – 3hr = 9 : 10

06. (C) DAD is not symmetriacal along the dotted lines

07. (B) (A) 3 + 7 10(not prime)

(B) 3 + 3 = 336

(Prime) & is also a prime

(C) 7 + 1 = 8 (not prime)

(D) 512 = 7 (Prime) but 52 is not prime.

08. (C) XC = 90

CX = 1110

increase in value = 110 – 90 = 20

09. (D) (A) 10 cm × 8 cm = 80 cm²

(B) 5 cm × 8 cm = 80 cm²

(C) 6 cm × 7 cm = 42 cm²

(D) 12 cm × 3 cm = 36 cm²

10. (D) 24 is not possible value of n because 84 is not divisible by 24.

11. (C) 30 – (14 – 2 × 3) = 30 – (14 – 6)

= 30 – (8) = 30– 8 = 22

(A) 30 – 14 – 2 × 3

= 30 – 14 – 6 = 16 – 6 = 10

(B) (30 – 14) – 2 × 3

= 16 – 2 × 3 = 16 – 6 = 10

(C) 30 – (14 – 6) = 30 – 8 = 22

(D) 30 – 14 – 6 = 16 – 6 = 10

12. (C) = 1kg – 350g = 650 g

 = 650 g + 650 g = 1300 g

13. (A) $2l$314 ml – 1l5 ml

2314 ml – 1005 ml

= 1309 ml

= 1l309 ml

14. (B) Converting $\frac{11}{4}$ into mixed fraction is $2\frac{3}{4}$

$2\frac{3}{4}$ is greater than 2 but less than 3.

So $\frac{11}{4}$ is between the numbers 2 & 3.

15. (D) Box A = 896

Box B = 2(896) –192 = 1600

Box A = Box B = 1600 + 896 = 2496

2496 ÷ 8 = 312

16. (C) 248 min ÷ 60 = 4 hrs 8 min

17. (D) Area = 12 cm × 8 cm = 96 cm²

12 cm

(12 – 4) cm = 8 cm

18. (C) 2 metre = 200 centimetres

19. (D) Deepak memorizes 40 words each morning but forgets 20 by the next night, so he effectively memorizes 20 words per day, To memorize all 400 words, he will need 20 mornings of studying (400 ÷ 20 = 20)

20. (C) 78 × 5 = 390

390 ÷ 10 = 39

21. (A) Smallest 4 digit number multiple of 3 is 1002 Biggest number when rounded off to nearest hundred gives 9000 is 9049.

9049 – 1002 = 8047

22. (C) 31 + 31 = 62

23. (D) = 13 line segments

24. (B) Total bottles = 29

Each tray keeps 5 bottles.

Least No. of trays required = 29 ÷ 5

= 5 + 4 bottle remains

= 5 tray + 1 tray = 6 trays

25. (B) A = 2160

B = 2160 + 285 = 2445

C = 2160 – 275 = 1885

2160 + 2445 + 1885 = 6490

26. (D) 982.311 × 2.43 = 2387.01573

27. (B) 5 × 7 = 35

10 × 7 = 70

28. (C) The diff between the place value & the value is 0

29. (D) 640 × 4 = 2560

1618 + 942 = 2560

30. (A) $1 - \dfrac{3}{5} = \dfrac{5-3}{5} = \dfrac{2}{5}$

$\dfrac{2}{5} \times 30 = 2 \times 6 = 12$

31. (A) $4\dfrac{1}{5} + \boxed{} = 9\dfrac{3}{10}$

$\boxed{} = 9\dfrac{3}{10} - 4\dfrac{1}{5} = \dfrac{93}{10} - \dfrac{21}{5}$

L.C.M. of 10, 5 is 10

$= \dfrac{93-42}{10} = \dfrac{51}{10} \Rightarrow 5\dfrac{1}{10}$

So, $\boxed{} = 5\dfrac{1}{10}$

32. (A) 5 : 45 PM − 11 : 30 AM = 6 hr 15 min

33. (C) **6** is not symmetric

34. (B) Jai = 1344

Tillu = 1344 − 34 = 1310

Karan = 1344 × 2 = 2688

1344 + 1310 + 2688 = 5342

35. (C) 4 × 8 = 32

REASONING

36. (C) One circle = C

Two circle = J

Three circle = k
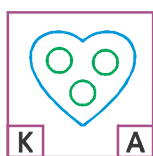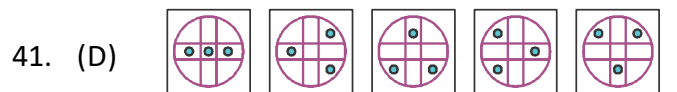
♡ = A

□ = F

△ = T

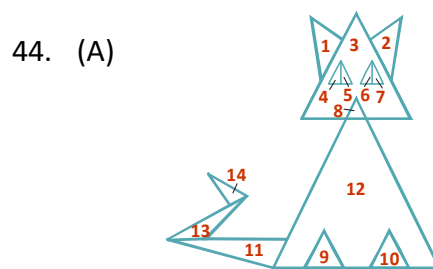⬠ = U

37. (A)

38. (C)

39. (B)

ABCD, BEGD, EFHG, FIJH, ILKJ, LMNK, AEGC, AFHC, AIJC, ALKC, AMNC, BFDH, BIJD, BLKD, BMND, EIJG, ELKG, EMNG, FLKH, FMNH, IMNJ

40. (D) The letters rearrange to spell "WATER," which is primarily used for drinking, making this the correct answer
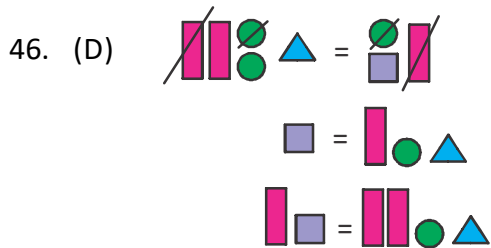
41. (D)

42. (D) Except option (D) remaining all palidromic numbers.

43. (C) E appears 2 times

T appears 4 times

S appears 5 times

W appears 2 times

44. (A)

45. (B) 4 + 0 = 0 ; 5 + 1 = 6 ;

7 + 2 = 9 ; 11 + 3 = 14

CRITICAL THINKING

46. (D)

47. (C) For every 2 boys in the queue, 2 girls join, forming a group of 4 people (2 boys & 2 girls). Since there are 12 boys, there are 6 groups, & each group includes 2 girls, so 6× 2 = 12 girls joined the queue
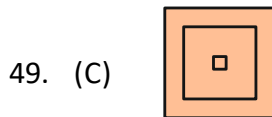
48. (A)

$$\odot \rightarrow \diamondsuit + \diamondsuit + \diamondsuit$$
$$\odot + \odot \rightarrow \diamondsuit + \diamondsuit + \diamondsuit + \diamondsuit + \diamondsuit + \diamondsuit$$
$$8 \diamondsuit \rightarrow 32$$
$$\diamondsuit \rightarrow 32 \div 8 = 4$$
$$\odot \rightarrow 3 \times 4 = 12$$

49. (C)

50. (C) Ram is having carrot juice.

	Anu	Kamal	Ram	Sam
Lemon	✔	✘	✘	✘
Carrot	✘	✘	✔	✘
Coffee	✘	✔	✘	✘
Tea	✘	✘	✘	✔

The End