



UNIFIED COUNCIL

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Unified International
Mathematics Olympiad

UNIFIED INTERNATIONAL MATHEMATICS OLYMPIAD (UPDATED)

CLASS - 4



Question Paper Code : UM9009

KEY

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

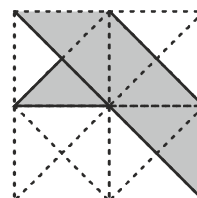
EXPLANATIONS

MATHEMATICS

- (C) 3 oranges makes \rightarrow 1 glass of juice
 $? \rightarrow$ 8 glass of juice
 8×3 oranges = 24 oranges
24 oranges makes \rightarrow 8 glasses of juice
- (A)  = $819 \div 7 = 117$
 = $\text{star symbol} \div 9 = 117 \div 9 = 13$
- (C) $3 \times 4 = 12$ is the smallest number i.e., exactly divisible by 2, 3 and 4
- (B) In 2021 i.e, in next 2 years we can write using 3 roman letters

- (A) Divide the square into equal parts first. There are 16 equal parts, of which 7 are shaded

$$16 - 7 = 9$$



$\frac{9}{16}$ of the square is not shaded

- (B) Given numbers 1, 5, 8, 9, 10, 12, and 15 we can divide number as
1, 9 and 10 in 1st group = 20

8 and 12 in 2nd group = 20

15 and 5 in 3rd group = 20

The largest number of groups = 3

7. (C) No. of lamp posts = 24

12 lamp posts are placed equally both sides of the bridge

Distance between each lamppost = 2m

So, the length of the bridge = $11 \times 2\text{m} = 22\text{m}$

8. (D) Area of the rectangle = 54 sq.m
width = 9

Area of the rectangle = $l \times b$

$$54 = l \times 9$$

9. (C) Total length of the string used by Sandy

$$= 1\frac{1}{2} + 2\frac{3}{4} \Rightarrow \frac{3}{2} + \frac{11}{4}$$

$$= \frac{6}{4} + \frac{11}{4} = \frac{17}{4} = 4\frac{1}{4}\text{m}$$

10. (A) 9996 is the largest 4 digit number which is a multiple of 4

$$9996 + 10000 = 19996$$

11. (A) Add option C + option D

$$25 + 37 = 62$$

The answer is option (B)

The number not needed is option (A) 73

12. (B) 1 minute = 60 seconds

$$1\frac{1}{4}\text{ min} = \frac{5}{4}\text{ min}$$

$$= \frac{5}{4} \times 60\text{ s} = 75\text{ s}$$

$$\therefore \text{The required fraction} = \frac{40}{75} = \frac{8}{15}$$

13. (B) Weight of empty beaker = 50 g

weight of water in the beaker = 250 g

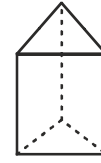
$$\text{weight of water} = 250\text{ g} - 50\text{ g} = 200\text{ g}$$

14. (B) 'Decreasing order' means: biggest to smallest. So, A should be less than 79432 and B should lie between A and 58723

15. (C) 20, 36, 5

Ascending order = 5, 20, 36

= V, XX, XXXVI



16. (D)

17. (A) 1 kg = 1000 g

$$4824\text{ g} - 4212\text{ g} = 612\text{ g}$$

18. (B) The shaded areas are half in shapes A, C and D. The shaded area in B is clearly more than half (compare with C).

19. (C) $1\text{ km} - 200\text{ m} = 1000\text{ m} - 200\text{ m} = 800\text{ m}$

20. (C) $359 \times 11 = 4308 - \boxed{}$
 $359 \times 11 = 3949$
 $4308 - 3949 = 359$

21. (A) $1\text{ h} + 7\text{ h} + 15\text{ min} = 8\text{ h } 15\text{ min}$

The duration of the flight was 8 h 15 min.

22. (C) $50 + 45 + 50 + 45 = 190\text{ m}$

The perimeter of the field is 190 m

23. (A) $100 + 100 + 40 = 240\text{ ml}$

The capacity of the bucket is 240 ml

24. (A) Mrs Tina is younger than 50 years old now is a multiple of 4 and she is an adult, so the possible age is either 24 or 44

$$24 \div 2 = 12; \quad 44 \div 2 = 22$$

Mrs Kavya should be 22 years old now since she is also an adult

$22 - 1 = 21$. Mrs Kavya was 21 years old last year

25. (B) Litre

26. (D) To find the answer, we need to subtract

$$2\frac{2}{3} \text{ from } 3\frac{1}{9}$$

$$3\frac{1}{9} - 2\frac{2}{3} = \frac{28}{9} - \frac{8}{3} = \frac{28}{9} - \frac{24}{9} = \frac{4}{9}$$

Options (A), (B) and (C) give

$$\frac{9}{4}, \frac{5}{9} \text{ and } \frac{14}{9} \text{ respectively}$$

$$\text{Options (D): } \frac{2 \times 2}{9} = \frac{4}{9}$$

27. (D) A $\frac{3}{8}$ turn to his right is the cinema. From this direction, a $\frac{3}{4}$ turn to his left will have him facing the bus stop
28. (D) The clock shows 20 : 19 once each day
So, in 365 days the clock shows 20 : 19 365 times during 2019
29. (D) 2008 is not a multiple of three
30. (C) Area of each small square = 49 cm^2
 $49 = 7 \times 7$
Length of a side of each small square = 7 cm
perimeter of square ABCD
 $= 7 + 7 + 7 + 7 + 7 + 7 + 7 + 7$
 $= 56 \text{ cm}$
31. (C) 1 km = 1000 m
7 km = 7000 m & 2 km 280 m = 2000 + 280
 $= 2280 \text{ m}$
 $= 7000 + 2280 = 9280 \text{ m}$
32. (C) Weight of Mr. X = 48.7 kg
Weight of Mr. Y = wt. of Mr. X – 4.9 kg
 $= 43.8 \text{ kg}$
Total weight of the two men
 $= (48.7 + 43.8) \text{ kg}$
 $= 92.5 \text{ kg}$
33. (B) $23 \times 5 = 115 \text{ s}$
 $= (115 \div 60) \text{ min}$
 $= 1 \text{ min } 55 \text{ s}$
34. (C) No. of stamps given to Anil = 47
No. of stamps with John more than Anil
 $= 358 + 47 = 405$
No. of stamps with John at first
(i.e., before given to Anil) = $405 + 47$
 $= 452 \text{ stamps}$

35. (A) Fraction of salt solution that is needed

$$= 1 - \frac{4}{5} = \frac{1}{5}$$


$$2.5 \text{ l} = 2.5 \times 1000$$


$$= 2500 \text{ ml}$$

Amount of salt solution that is needed to fill the container = $\frac{1}{5} \times 2500$
 $= 500 \text{ ml}$

REASONING

36. (A) 'F' is coded for shaded figure
'T' is coded for unshaded figure

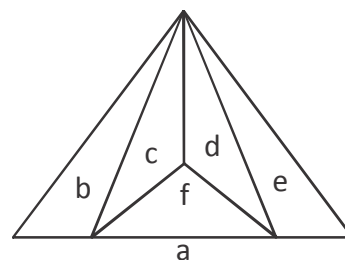
 is coded as 'P'

 is coded as 'A'.

Hence  is coded as PF.

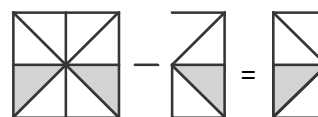
37. (C) B A A L G E R
A L G E B R A
38. (C) Kolkata, Bangalore and Hyderabad are the state capitals. Whereas New Delhi is the capital of India.

39. (D)



40. (C) Arrow moves one side of a square for every time in clock wise direction. Horizontal and vertical line occupy alternate position. Triangle, circle and square repeated.

41. (B)






42. (B) NOPQRSTUVWXYZMLKJIHGFEDCBA

16th letter from right is 'X'.

43. (C) B R A I N N A I R
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
* @ # \$ & & # \$ @

44. (D) 3, 6, 9 images are similar.

45. (D)  +  = 

CRITICAL THINKING

46. (C) If 'R' is removed.

BEAD, DOVE, SHOT, BOUGHT new words are formed.

47. (C) Kohima, Dispur, Lucknow, Agra, Jaipur.

48. (C) 

49. (D) 

50. (A) Water is essential part.

===== The End =====