UNIFIED COUNCIL

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Unified International Mathematics Olympiad

UNIFIED INTERNATIONAL MATHEMATICS OLYMPIAD (UPDATED)

CLASS - 3

Question Paper Code : UM9246

KEY

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

EXPLANATIONS

MATHEMATICS

1: (C) $6 \times 5 + 15 = 30 + 15 = 45 = 9 \times 5$

2: (B) Cost of one water bottle = ₹ 42 ÷ 6 = ₹ 7

∴ Cost of 4 bottles = ₹ 7 × 4 = ₹ 28

3: (C) Difference between 4827 and 3429 = 4827 – 3429 = 1398

Sum of 3809 and 2134 = 3809 + 2134 = 5943

∴ Difference of 5943 & 1398 = 5943 – 1398 = 4545

4: (C) Required number = 7 × 12 = 84

Thrice of required number = 3 × 84 =252

5: (C) Number of numbers between 250 & 800 = 800 – 250 = 550

∴ Middle number = $\frac{550}{2} = 275$

∴ Required number = 250 + 275 = 525

6: (A) Present ages sum of sid and Mehak

= 40 years – 2 × 8 years

= 24 years

Given age of sid = 15 years

∴ Age of Mehak = 24 years – 15 years = 9 years

7: (B) $236 + 79 = 315 = 7 \times 45$

8: (A) Required number $= 993 - 143 + 13 - 793 = 70$

9: (A) Number marbles having Reyan $= 231 + 538 + 211 = 980$

$\therefore$ Blue marbles + green marbles = 980

$\therefore$ 4 times green marbles + green marbles = 980

5 times green marbles = 980

$\therefore$ No. of green marbles $= \frac{980}{5} = 196$

10: (D) $86 - 46 = 40$

$\therefore \frac{40}{2} = 20$

No. of books = 20 + 46 = 66.

$\therefore$ Nancy has to give 66 bookmarks to Lasya.

11: (D) 1 mug holds $\frac{8 \text{ glasses}}{2} = 4$ glasses of water

$\therefore$ No. of glasses of water requires to fill one flask $= 4 \times 10$

$\therefore$ Number of glasses of water required to fill 3 flasks

$= 40 \times 3 = 120$

12: (B) $\frac{3}{4} = 1 - \textcircled{?}$

$\therefore \textcircled{?} = 1 - \frac{3}{4} = \frac{4-3}{4} = \frac{1}{4}$

13: (B)

$4)12(3$
$\frac{12}{0}$

$4)15(3$
$\frac{12}{3}$

15 gives remainder 3 which is odd when divided by 4

14: (C) Number of hours worked in a week $= 7 \times 5 = 35$ hour

Number of hours worked for two weeks

$= 2 \times 35$ h $= 70$ h

$\therefore$ Amount recived for 70 hours

$= 70 \times ₹\ 60 = ₹\ 4200$

15: (D) $900 = 300 \times 3$

16: (A) $7 \times 7 + 7 + 7 = 7 \times 7 + 7 \times 2 = 7 \times 9$

17: (B) 7 m 43 cm is the smallest in the given options

18: (C) Total weight of (2 × 2 apples + 3 apples) = 994 g

$\therefore$ Weight of one apple $= \frac{994 \text{ g}}{7} = 142 \text{ g}$

Weight of basket = 4 apples weight = 142 g × 4 = 568 g

19: (C) LCM of 12, 9 & 6 = 36

$\therefore \frac{5}{12} = \frac{5}{12} \times \frac{3}{3} = \frac{15}{36}$

$\frac{4}{9} = \frac{4}{9} \times \frac{4}{4} = \frac{16}{36}$

$\frac{3}{6} = \frac{3}{6} \times \frac{6}{6} = \frac{18}{36}$

$\therefore \frac{5}{12}, \frac{4}{9}, \frac{3}{6}$ is the required order

20: (C) 1 out of 2 equal parts of a circle is a semicircle.

21: (D) Total mass of 9 slices = 630 g

$\therefore$ Mass of 1 slice $= \frac{630 \text{ g}}{9} = 70 \text{ g}$

22: (C) $\frac{7}{12} - \frac{1}{4} = \frac{7}{12} - \frac{3}{12} = \frac{4}{12} = \frac{1}{3}$

23: (D) Total number of triangles $\rightarrow 4 \times 2 = 8$

Shaded triangle $\rightarrow 5$

Fraction of figure shaded $\rightarrow \frac{5}{8}$

24: (A) $21 \times 10 + 5 \times 100 + 8 = 500 + 210 + 8 = 718$

25: (D) 21, 55, 31, 81, 1, 23, 93, 69, 59, 37, 47, 51, 27

are the given odd numbers in the table

26: (D) $3870 - 2542 = 1328$

27: (B) $8 + 4 + 6 = 18$ & $4 + 6 + 8 = 18$

28: (A) Given □ + △ = 3147 & △ + △ + □ = 5489

∴ △ = 5489 – 3147 = 2342

2342 + □ = 3147

□ = 3147 – 2342 = 805

∴ △ – □ = 2342 – 805 = 1537

29: (B) X = 77 – 29 = 48

30: (D) Any odd number multiplied by '5' gives odd number

31: (A) Number of mangoes

$$= \frac{2\text{ kg}}{250\text{ g}} = \frac{2000\text{ g}}{250\text{ g}} = 8$$

32: (B) Time taken to sdve one problem = $\frac{2\text{ h }15\text{ min}}{9}$

$$= \frac{135\text{ m}}{9} = 15\text{ m}$$

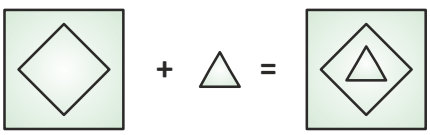
33: (A) It is the combination of cone & cylinder

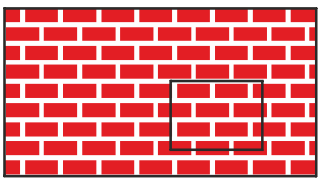
34: (B) 1 kg 39 g is the lighest in the given options

35: (D) 10 p.m. – 1 p.m. = 9 hours

∴ No. of half – hours = $\frac{9\text{ hours}}{\left(\frac{1}{2}\right)\text{hours}} = 18$

REASONING

36: (B) 

37: (C) 

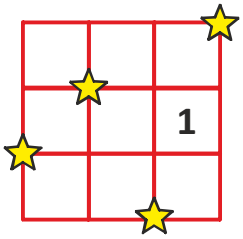
38: (A) 

39: (B) Each pair contains a letter each from backward sequence (Z-A) and forward sequence (A-Z) following the natural alphabetical sequence.

40: (A) 

41: (C)

Z	Y	X	W	V	U	T	S	R	Q	P	O	N	M	L	K	J	I	H	G	F	E	D	C	B	A
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

42: (D) 

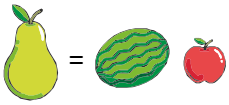
43: (B) 'G' is the 6th letter from 'A', 'M' is the 6th letter from 'G'. Similarly 'Y' is the 6th letter from 'S'.

44: (B) Except option (B) fan, all other items are eatable.

45: (D) 

CRITICAL THINKING

46: (C) 

47: (D) 

48: (B) 9

F O O D S T U F F F O O D S T U F F F O O D S T U F F

49: (D) 

50: (C) C is the longest path between house and the boy.