



UNIFIED COUNCIL

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Unified International
Mathematics Olympiad

UNIFIED INTERNATIONAL MATHEMATICS OLYMPIAD

CLASS - 4

Question Paper Code : UM9246

KEY

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

EXPLANATIONS

MATHEMATICS

1: (A) $1256 \times 6 = 7536$

$$7536 - 3446 = 4090$$

2: (B) Since 8 and 9 do not have a common factor, a number that is a common multiple of 8 and 9 is a multiple of

$$= 8 \times 9$$

$$8 \times 9 = 72$$

Multiples of 72: 72 720, 792, 864, 936, 1008 ...

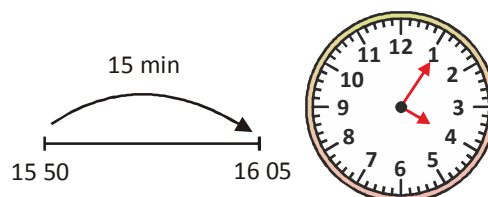
Greatest 3 - digit number that is a common multiple of 8 and 9 = 936

3: (D) Length of a blue ribbon = 125 cm

Length of red ribbon = 125 cm + 380 cm = 505 cm

Length of the pink ribbon = 505 cm + 98 cm = 603 cm

4: (B) $16:05 = 4.05$ p.m.



5: (A) Smallest number when rounded to the nearest hundred is 300 = 250
 Greatest number when rounded to the nearest hundred is 300 = 349
 Difference between the smallest and greatest number = $349 - 250 = 99$

6: (C) Given $\text{Orange} + \text{Star} + \text{Heart} = 15$

$$\text{Orange} + \text{Orange} + \text{Orange} = 12$$

$$\text{Star} + \text{Heart} + \text{Heart} = 16$$

Find $\text{Star} = ?$

$$3 \text{ Orange} = 12 \Rightarrow \text{Orange} = 12 \div 3 = 4$$

$$\text{Orange} = 4$$

$$\text{Orange} + \text{Star} + \text{Heart} = 15$$

$$\text{Star} + \text{Heart} = 15 - 4 = 11$$

$$\text{Star} + \text{Heart} = 11$$

$$\text{Star} + \text{Heart} + \text{Heart} = 16$$

$$11 + \text{Heart} = 16$$

$$\text{Heart} = 16 - 11 = 5$$

$$\text{Heart} = 5$$

$$\text{Star} + 5 + 5 = 16$$

$$\text{Star} + 10 = 16$$

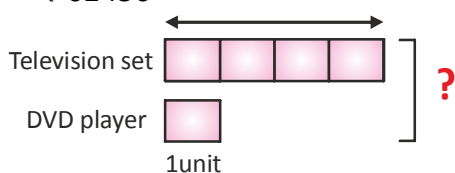
$$\text{Star} = 16 - 10 = 6$$

7: (B) 4 units \rightarrow ₹49960

$$1 \text{ unit} \rightarrow \text{₹}49960 \div 4 = \text{₹} 12490$$

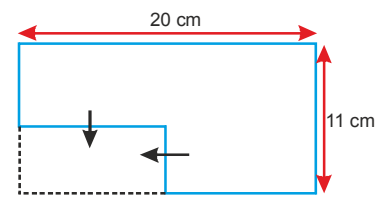
$$5 \text{ units} \rightarrow 5 \times \text{₹} 12490 = \text{₹} 62450$$

The total expenditure by Mr Hari was ₹ 62450



8: (C) Number of green marbles = $24 \div 4 = 6$

$$\text{Number of red marbles} = 24 - 6 = 18$$



9: (C)

$$20 \text{ cm} + 20 \text{ cm} + 11 \text{ cm} + 11 \text{ cm} = 62 \text{ cm.}$$

10: (C) $2 \times 0 \times 3 \times 0 + 2140 - 2 \times 1 \times 10 \times 6$

$$0 + 2140 - 120 = 2020$$

11: (D) Multiples of 9 = 9, 18, 27, 36, 45, 54, 63, 72, 81, 90

Multiples of 9 which are odd numbers less than 72 = 9, 27, 45 & 63 are 4 odd numbers

12: (C) Capacity of a flask = $200 \times 4 = 800 \text{ ml}$

$$\text{Capacity of a pail} = 800 \times 5 = 4000 \text{ ml} = 4 \text{ l}$$

A pail can hold 4 l of water

13: (A) 4 pm + 6 hours = 10 pm

$$10 \text{ pm} - \frac{1}{2} \text{ hour} = 9.30 \text{ pm}$$

i.e, 21 : 30

14: (A) Number of children in 1 group is $252 \div 9 = 28$

$$\text{Number of girls in 1 group} = 28 - 17 = 11$$

$$\text{Total number of boys} = 9 \times 17 = 153$$

$$\text{Total number of girls} = 9 \times 11 = 99$$

Difference between the number of boys and girls

$$153 - 99 = 54$$

\therefore 54 more boys than girls

15: (B) $\text{Star} + \text{Star} + \text{Star} = 75$

$$\text{Star} = 75 \div 3 = 25$$

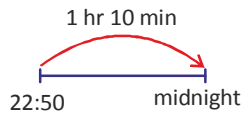
$$\text{Star} + \text{Star} + \text{Star} + \text{Star} + \text{Star}$$

$$= 25 + 25 + 25 + 25 + 25 = 125$$

16: (A) $56 \text{ cm} - 20 \text{ cm} - 20 \text{ cm} = 16 \text{ cm}$

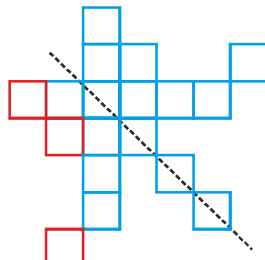
$16 \text{ cm} \div 2 = 8 \text{ cm}$

17: (D) $9 \text{ hr } 40 \text{ min} + 1 \text{ hr } 10 \text{ min} = 10 \text{ hr } 50 \text{ min}$



The train took 10 hr 50 min to travel from station A to station B

18: (C)



Line of symmetry

19: (A) $360 \rightarrow 1 \text{ hr or } 60 \text{ min}$

$1^\circ \rightarrow \frac{60}{360} \text{ min} = \frac{1}{6} \text{ min}$

$120^\circ \rightarrow \frac{120}{6} = 20$

$= (10 + 10) \text{ min}$

It will be 10.10 a.m.

20: (B) $4 \times 2 = 8$

$2 \times 8 = 16$

No. of students = 40

Each student folds 4 paper cranes

$= 40 \times 4 = 160$

No. of teachers = 2

Each teacher folds paper cranes twice of a student $= 4 \times 2 = 8 \rightarrow 2 \times 8 = 16$

Total paper = $160 + 16 = 176$ cranes.

21: (D) Statement P : 200 thousandths = $200 \times 0.001 = 0.2$

2 tenths = 0.2 (True)

Statement Q : The factor 1 has been omitted from the list. (False)

Statement R : $8 \times 22 = 176$

$9 \times 21 = 189$

$\frac{8}{21} = \frac{176}{21 \times 22}$

$\frac{9}{22} = \frac{189}{21 \times 22}$

$\frac{8}{21}$ is smaller than $\frac{9}{22}$ (True)

Statement S : 45 900 appears before 45 899 (False)

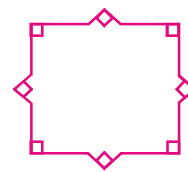
123,111,118,106,113, —, 108

22: (A)

$-12 \quad +7 \quad -12 \quad +7 \quad -12 \quad +7$

$113 - 12 = 101$

[Check: $101 + 7 = 108$]



23: (B)

24: (C) Number of quarters in 3 wholes

$\rightarrow 3 \times 4 = 12$ (4 quarters make 1 whole)

Number of thirds in 2 wholes

$\rightarrow 2 \times 3 = 6$ (3 thirds make 1 whole)

$12 + 6 = 18$

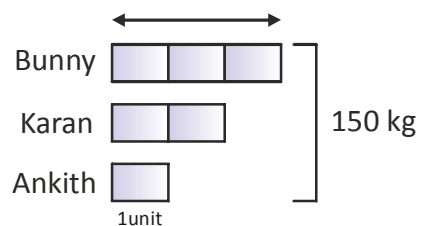
25: (B)

6 units $\rightarrow 150 \text{ kg}$

1 unit $\rightarrow 150 \div 6 = 25 \text{ kg}$

3 units $\rightarrow 3 \times 25 = 75 \text{ kg}$

Bunny's mass is 75 kg



26: (C)

$570 \times 7 = 3990$

$3990 + 2 = 3992$

27: (A)

$\frac{5}{5}$ of money $\rightarrow ₹ 25$

$\frac{1}{5}$ of money $\rightarrow ₹ 25 \div 5 = ₹ 5$

$\frac{2}{5}$ of money $\rightarrow 2 \times ₹ 5 = ₹ 10$

Cost of the Pencil = ₹ 10

28: (C) Mass of 24 apples = $17 - 5 = 12$ kg

$$\text{Mass of each apple} = \frac{12 \text{ kg}}{24}$$

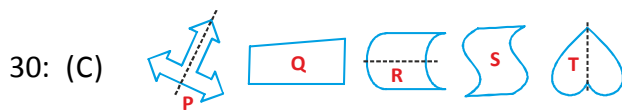
$$= \frac{1}{2} \text{ kg}$$

\therefore Mass of 264 apples = $264 \times \frac{1}{2} \text{ kg} = 132 \text{ kg}$

29: (A) Area of the square living room = 144 m^2

$$144 = 12 \times 12$$

Length of the side wall in her living room = 12 m



31: (D) The product of the two digits = 15

$$3 \times 5 = 15, 15 \times 1 = 15$$

$$\text{Sum of the digits} = 3 + 5 = 8$$

32: (A) $3:15 \text{ p.m.} \xrightarrow{1 \text{ hr}} 4:15 \text{ p.m.}$

$$1 \text{ h} = 1 \text{ full turn} = 360^\circ$$

$4:15 \text{ p.m.} \xrightarrow{15 \text{ min}} 4:30 \text{ p.m.}$

$$15 \text{ min} = \frac{1}{4} \text{ turn} = 90^\circ$$

Total angle the minute hand should move = $360^\circ + 90^\circ = 450^\circ$

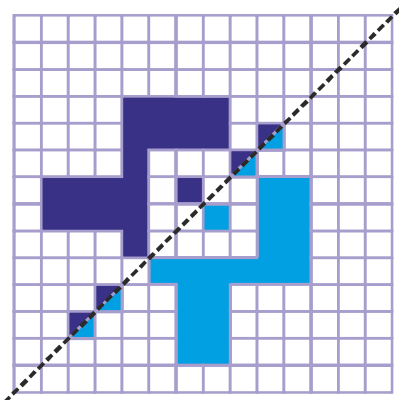
33: (C) MMXX

$$1000 + 1000 + 10 + 10 = 2020$$

34: (C) $1285 + 1715 = 3000$ (total number of sweets)

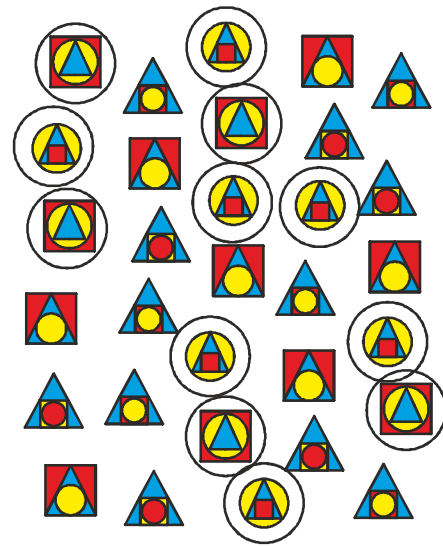
$$3000 \div 9 = 333 \text{ R } 3$$

35: (D)



REASONING

36: (D)



37: (C) Count the number of sides. The shape which is given in group has 6 sides. So, option (C) is correct.

38: (A) Each time the largest two rectangles are removed.



39: (D) After rearranging the letters

DEN : LION :: NEST : ?

LION lives in DEN similar way PARROT lives in NEST.

40: (D) A, B, C are musical instruments, where as 'D' is a mechanical tool.



42: (A) BC, KL, OP (3 pairs)

43: (B) If C is taller than B, then we get $C > B$ and C is shorter than D, then we get $D > C$. Thus we get the relation $D > C > B$.

Now, as all of B, C and D are shorter than A. This means A is the tallest person here. Thus, $A > D > C > B$.

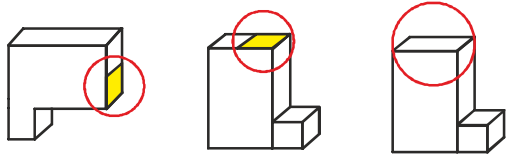
44: (D) A key is used to open a lock and since key is called fish, the correct answer is fish.



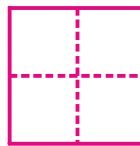
CRITICAL THINKING

46: (B) C came first (as derived in the above answer), D is second (given in the question) and between A and B, A finished ahead of B. So A came third and B finished last. Hence, correct option is option (B).

47: (C) Option (C) is correct



48: (A) Only from statement that "Day after tomorrow is a Wednesday", we can see that today is a Monday. Hence option A is the correct answer.



49: (C)

50: (B) Seed – Plant – Tree – Wood – Table

=====*The End*=====