UNIFIED INTERNATIONAL MATHEMATICS OLYMPIAD (UPDATED)

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

$= 8 \times 9$

$8 \times 9 = 72$

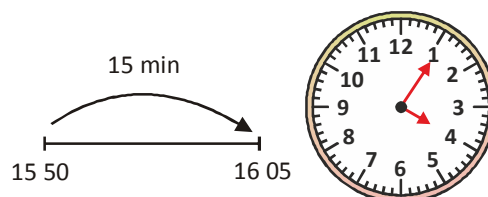Multiples of 72: 72 .... 720, 792, 864, 936, 1008 ...

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 ⬤ + ⭐ + 💙 = 15

⬤ + ⬤ + ⬤ = 12

⭐ + 💙 + 💙 = 16

Find ⭐ = ?

3 ⬤ = 12 ⇒ ⬤ = 12 ÷ 3 = 4

⬤ = 4

⬤ + ⭐ + 💙 = 15

⭐ + 💙 = 15 − 4 = 11

⭐ + 💙 = 11

⭐ + 💙 + 💙 = 16

11 + 💙 = 16

💙 = 16 − 11 = 5

💙 = 5

⭐ + 5 + 5 = 16

⭐ + 10 = 16

⭐ = 16 − 10 = 6

7: (B) 4 units → ₹49960

1 unit → ₹49960 ÷ 4 = ₹ 12490

5 units → 5 × ₹ 12490 = ₹ 62450

The total expenditure by Mr Hari was ₹ 62450

Television set — 4 units

DVD player — 1 unit

8: (C) Number of green marbles = 24 ÷ 4 = 6

Number of red marbles = 24 − 6 = 18

9: (C)

20 cm + 20 cm + 11 cm + 11 cm = 62 cm.

10: (C) 2 × 0 × 3 × 0 + 2140 − 2 × 1 × 10 × 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 × 4 = 800 ml

Capacity of a pail = 800 × 5 = 4000 ml = 4 l

A pail can hold 4 l of water

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

10 pm − $\frac{1}{2}$ hour = 9.30 pm

i.e, 21 : 30

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

Number of girls in 1 group = 28 − 17 = 11

Total number of boys = 9 × 17 = 153

Total number of girls = 9 × 11 = 99

Difference between the number of boys and girls

153 − 99 = 54

∴ 54 more boys than girls

15: (B) ⭐ + ⭐ + ⭐ = 75

⭐ = 75 ÷ 3 = 25

⭐ + ⭐ + ⭐ + ⭐ + ⭐

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

16: (A) 56 cm − 20 cm − 20 cm = 16 cm

16 cm ÷ 2 = 8 cm

17: (D) 9 hr 40 min + 1 hr 10 min = 10 hr 50 min
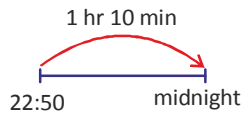
The train took 10 hr 50 min to travel from station A to station B

18: (C)
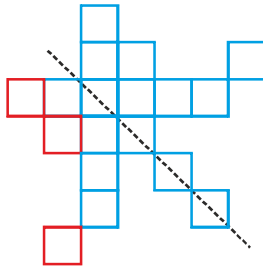
Line of symmetry

19: (A) 360 → 1 hr or 60 min

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

$$120° \rightarrow \frac{120}{6} = 20$$

= (10 + 10) min

It will be 10.10 a.m.

20: (B) 4 × 2 = 8

2 × 8 = 16

No. of students = 40

Each students folds 4 paper cranes

= 40 × 4 = 160

No. of teachers = 2

Each teacher folds paper cranes twice of a student = 4 × 2 = 8 → 2 × 8 = 16

Total paper = 160 + 16 = 176 cranes.

21: (D) Statement P : 200 thousandths = 200 × 0.001 = 0.2

2 tenths = 0.2 (True)

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

Statement R : 8 × 22 = 176

9 × 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)

22: (A)

113 − 12 = 101

[Check: 101 + 7 = 108]
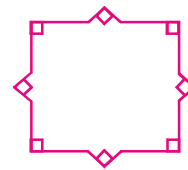
23: (B)

24: (C) Number of quarters in 3 wholes

→ 3 × 4 = 12 (4 quarters make 1 whole)

Number of thirds in 2 wholes

→ 2 × 3 = 6 (3 thirds make 1 whole)

12 + 6 = 18

25: (B) 6 units → 150 kg

1 unit → 150 ÷ 6 = 25 kg

3 units → 3 × 25 = 75 kg

Bunny's mass is 75 kg
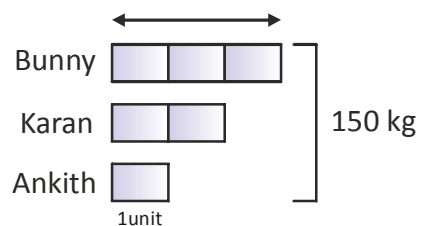
26: (C) 570 × 7 = 3990

3990 + 2 = 3992

27: (A) $\frac{5}{5}$ of money → ₹ 25

$\frac{1}{5}$ of money → ₹ 25 ÷ 5 = ₹ 5

$\frac{2}{5}$ of money → 2 × ₹ 5 = ₹ 10

Cost of the Pencil = ₹ 10

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

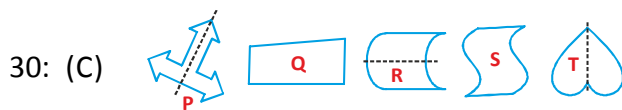Mass of each apple = $\dfrac{12 \text{ kg}}{24}$

$= \dfrac{1}{2}$ kg

∴ Mass of 264 apples = $264 \times \dfrac{1}{2}$ kg = 132 kg

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

144 = 12 × 12

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

30: (C)

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

3 × 5 = 15, 15 × 1 = 15

Sum of the digits = 3 + 5 = 8

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

1 h = 1 full turn = 360°

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

15 min = $\dfrac{1}{4}$ turn = 90°

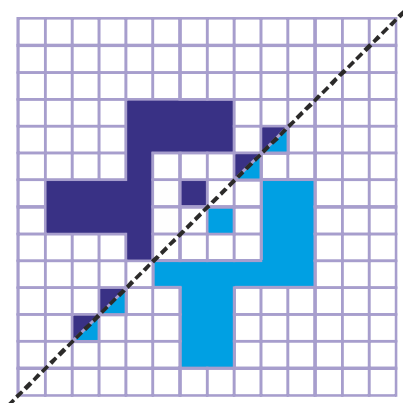Total angle the minute hand should move

= 360° + 90° = 450°

33: (C) MMXX

1000 + 1000 + 10 + 10 = 2020

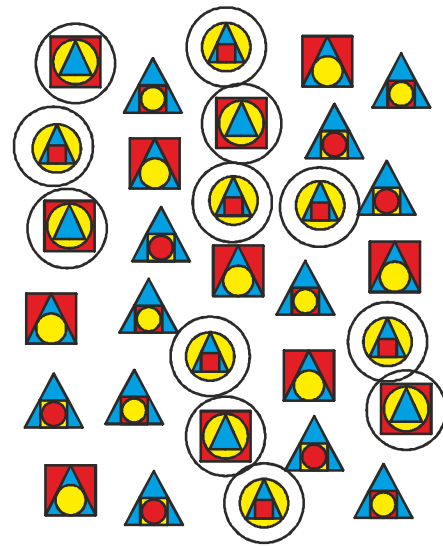**34: (C)** 1285 + 1715 = 3000 (total number of sweets)

3000 ÷ 9 = 333 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.

41: (C)

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.
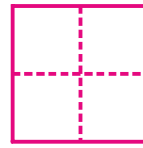
45: (B)

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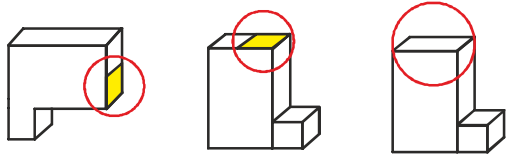
48: (A)   Only from statement that "Day after tomorrow is a Wednesday", we can see that today is a Monday. Hence option A is the correct answer.

49: (C)

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

The End