UIM
Unified International Mathematics Olympiad

UNIFIED INTERNATIONAL MATHEMATICS OLYMPIAD

CLASS - 3
Question Paper Code : UM9274

KEY

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

EXPLANATIONS

MATHEMATICS

01. (D) Triangle has no parallel lines.

02. (D) Watermelon + X = 6 kg

   Y = 10 kg – 6 kg

   = 4 kg

03. (C) 24 × 8 = 192

   4 × 48 = 192

04. (B) Varun = 17 + 30 = 47

   = 47 – 22 = 25

   Vihan = 22 + 25 = 47

05. (A)

06. (C) 356 + 110 = 400 + 100 = 500

07. (D) 50 × 100 = 5000, 40 × 100 = 4000,

   210 × 10 = 2100, 789 × 10 = 7890

08. (C) $\dfrac{3}{8} + \dfrac{5}{8} = 1$

   So the number in the box should be less than 5. 1, 2, 3 and 4 are smaller than 5. The greatest number that can appear in the box is 4.

09.	(C)	Cookies = 876 − 601 = 275
		Pies = 548 − 390 = 158
10.	(C)	135 hours ÷ 24 hr/day = 5 days with remainder 15 hrs
	∴	135 hr = 5 days 15 hrs
11.	(C)	65kg = 65000 g difference
		= 65000 g − 62450 g = 2550 g = 2kg 550 g
12.	(D)	The total value is
		5 × 1 + 3 × 2 + 2 × 5 = 5 + 6 + 10
		= 21 rupees

13. (A)

2nd	3rd	4th
	1st	
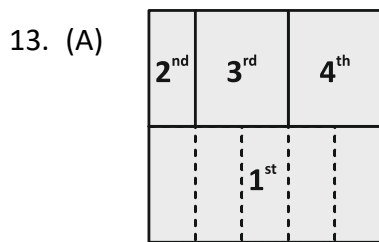
14. (C) 24 × 3 = 72, 24 × 1 = 27,
72 − 24 = 48

15. (D) Divide the circle into 6 equal parts $\frac{2}{6}$ of the circle is shaded.
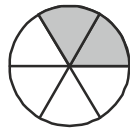
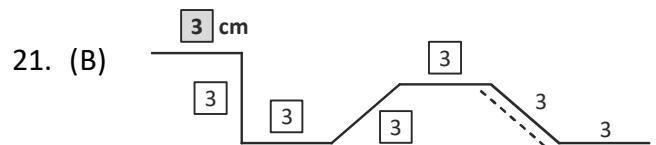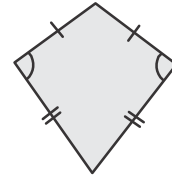16. (C) 5 l = 5000 ml

Number of glasses of water needed to fill up the bucket = $\frac{5000}{200} = 25$

17. (B)
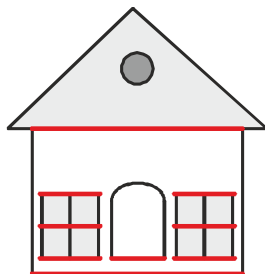
18. (C) P + Q = 20 l ; Q + R = 18 l

R = Q + 2 l ; R = P − 2 l

2R = P + Q ; R = $\frac{20\,l}{2}$

R = 10 l

P = 10 l + 2 l = 12 l

19. (D) Since Bala works from Monday to Thursday and on Saturday, he works 5 days a week.

So, 9 h × 5 = 45 h

20. (C) In option (C) image does not have parallel lines.

21. (B)

22. (B) 1 l = 1000 ml

1000 ml ÷ 5 = 200 ml

Each glass contained 200 ml of orange juice.

2 × 200 ml = 400 ml

He drank 400 ml of orange juice

23. (A) 54 hundreds = 5400

5400 − 3362 = 2038

24. (B) 2 km − 927 m = 1 km 1000 m − 927 m

= 1 km 73 m

She still has to run a distance of 1 km 73 m

25. (A) Pen → ₹ 3

File → ₹ 3 + ₹ 1 = ₹ 4

Total cost of 6 pens → 6 × ₹ 3 = ₹ 18

Total cost of 7 files → 7 × ₹ 4 = ₹ 28

Total cost of the pens and files

→ ₹ 18 + ₹ 28 = ₹ 46

Total amount, ?
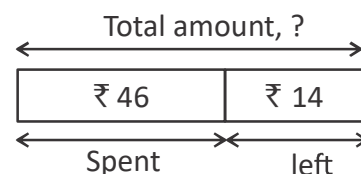
₹ 46	₹ 14
Spent	left

₹ 46 + ₹ 14 = ₹ 60

Mr. Tanish had ₹ 60 at first

26. (C) = 6734

27. (C) $21 \div 1 = 21$

28. (C) $800 \times 6 = 4800$ m

29. (D)

40 min   2 h   30 min

11:20 a.m   12 noon   2 p.m   2:30 p.m
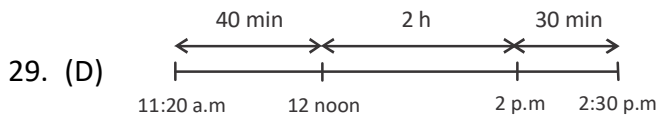
40 min + 2h + 30 min = 2 h 70 min

= 2 h + 60 min + 10 min

= 2 h + 1 h + 10 min

= 3 h 10 min

He stayed at the library for 3 h 10 min.

30. (C) $640 \div 4 = 160$

$160 \div 8 = 20$

31. (C)

32. (C)
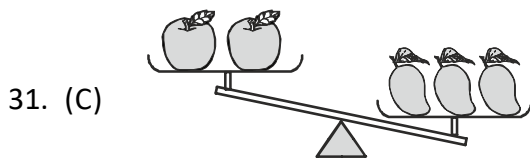
33. (C)   650 paise = ₹ 6.50

650 paise + ₹ 3.50 = ₹ 6.50 + ₹ 3.50

= ₹ 10

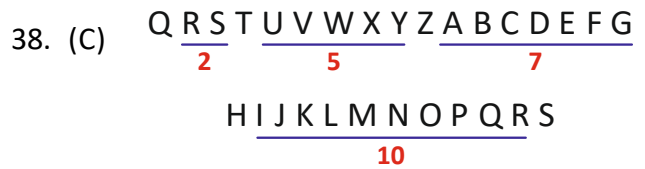**34.** (C)   45 tens 16 ones = 450 + 16 = 466

35. (A)   Total cubes = 8 + 8 = 16

Total volume = 16 kg

REASONING

36. (A)
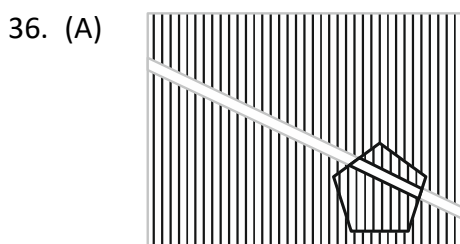
37. (B)   Carrot grown under soil and remaining above soiil.

38. (C)

Q R S T U V W X Y Z A B C D E F G
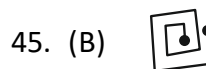   2   5   7

H I J K L M N O P Q R S
        10

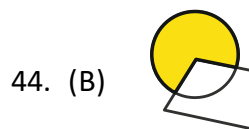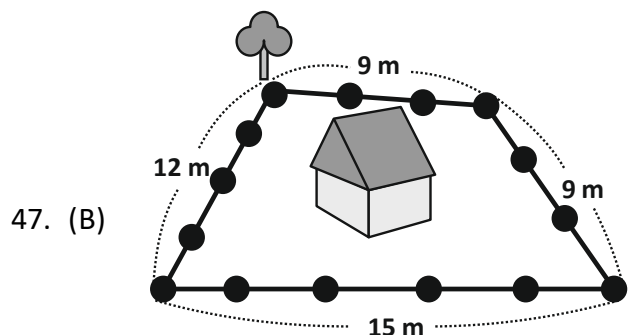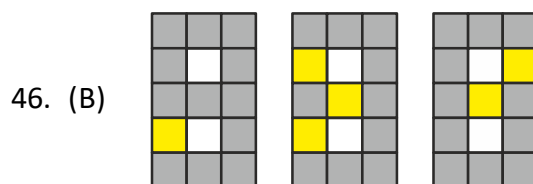**39.** (Delete)

40. (C)   In each figure,

Number on the 'head' = Sum of the numbers on the 'feet' ÷ 2

Hence, the missing number is 5.

41. (B)

42. (B)   Apple 5, Ball 4, Chair 5, Dog 3

43. (C)

 : B000t

44. (B)

45. (B)

CRITICAL THINKING

46. (B)

47. (B)

48. (A)   Heat and light are both different types of energy. Light energy can be converted into heat energy. A black object absorbs all wavelengths of light and converts them into heat, so the object gets warm.

49. (D) The number of black dots in each grid increases by 1 each time, starting with the top left grid and working to the right, top row then bottom row.

50. (B) Going for a jog three times a week.

Among the options, jogging regularly is the most beneficial habit for promoting physical health and well-being.

The End