



Unified International  
Mathematics Olympiad

**UNIFIED INTERNATIONAL MATHEMATICS OLYMPIAD (UPDATED)**

**CLASS - 4**

**Question Paper Code : UM9264**

**KEY**

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

**EXPLANATIONS**

**MATHEMATICS**

01. (A) Fraction of circle painted white

$$= 1 - \frac{7}{12} = \frac{5}{12}$$

$\frac{5}{12}$  of the circle was painted white.

02. (D) Given mass of packet flour = 600 g

Mass of packets of flour and sugar

$$= 1 \text{ kg } 250 \text{ g} = 1250 \text{ g}$$

$$\text{Mass of sugar} = 1250 \text{ g} - 600 \text{ g} = 650 \text{ g}$$

Mass of 2 packets of sugar

$$= 650 \text{ g} \times 2 = 1300 \text{ g}$$

03. (B) Weight of white pig + weight of black pig

$$= 320 \text{ kg}$$

Weight of white pig + 32 + weight of white pig = 320 kg

$$2(\text{Weight of white pig}) + 32 = 320 \text{ kg}$$

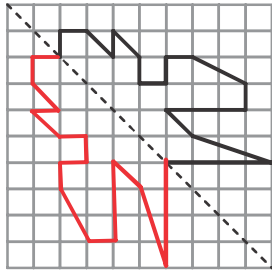
$$2(\text{Weight of white pig})$$

$$= 320 \text{ kg} - 32 \text{ kg} = 288 \text{ kg}$$

$$\text{Weight of white pig} = \frac{288}{2} = 144 \text{ kg}$$

∴ White pig weight = 144 kg

04. (B)



05. (A)

Duration of sleep in a day  
= 10 p.m to 6 a.m  
= 8 hours  
1 week = 7 days  
=  $7 \times 8$  hours = 56 hours  
=  $56 \times 60$  minutes  
= 3360 minutes

06. (C)

$4 \times 4 + 4 + 4 + 4 + 4 + 4 + 4$   
=  $16 + 24 = 40$

07. (B)

Given numbers = 4, 6, 10, 18  
From the given numbers, each number is two less than twice the previous number  
 $6 - 4 = 2$

08. (B)

No. of people in a stadium = 8763  
No. of adults = 7034  
No. of children =  $8763 - 7034 = 1729$   
No. of adult left =  $7034 - 1456 = 5578$   
No. of children left =  $1729 - 363 = 1366$   
No. of children left in the stadium = 1366

09. (C)

$5460 \div 5$    $273 \times 4$   
1092 Equal to 1092

10. (D)

1 bus = 30 children and 4 adults  
9 buses =  $34 \times 9 = 306$

11. (C)

Mrs. Nitin's daughters age  
= 9 years 6 months  
Mrs. Nitin's age =  $(9 \text{ years } 6 \text{ months}) \times 3$   
= 27 years 18 months  
= 28 years 6 months

12. (D)

No. of rupee coins in 50 rupee note  
=  $50 \div 2 = 25$  coins

13. (A)

Perimeter of figure P = 16 cm  
Perimeter of figure Q = 12 cm  
=  $16 - 12 = 4$  cm  
Figure P is 4 cm longer than figure Q.

14. (D)

$4 \text{ m } 50 \text{ cm} - 3 \text{ m } 54 \text{ cm} = 96 \text{ cm}$   
 $96 \div 4 = 24 \text{ cm}$

15. (B)

$2l = 2000 \text{ ml}$   
 $2000 - 1050 = 950$   
 $950 \div 2 = 475 \text{ ml}$   
There is 475 ml of milk in each jug.

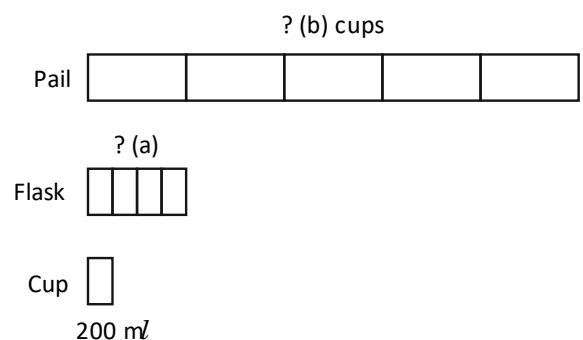
16. (C)

10 min  
 $4.25 \rightarrow 4.35$   
The show begin at 4.25  
30 min  
 $3.30 \rightarrow 4.00$   
25 min  
 $4.00 \rightarrow 4.25$   
 $30 \text{ min} + 25 \text{ min} = 55 \text{ min}$   
She took 55 min to reach the cinema

17. (B)

$$1 - \frac{1}{9} - \frac{19}{27} = \frac{27}{27} - \frac{3}{27} - \frac{19}{27} = \frac{5}{27}$$

18. (C)



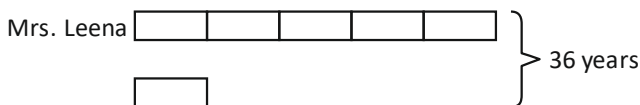
Capacity of a flask =  $200 \times 4 = 800 \text{ ml}$   
Capacity of pail =  $800 \times 5 = 4000 \text{ ml} = 4 \text{ l}$   
A pail can hold 4l of water

19. (B) No. of red pencils = 352  
 No. of blue pencils = 297  
 Total no. of pencils =  $352 + 297 = 649$   
 Cost of 1 pencil = ₹2  
 Cost of 649 pencils =  $649 \times ₹2 = ₹1298$   
 Amount left with Chitra = ₹32  
 Amount with Chitra at first  
 = ₹1298 + ₹32 = ₹1330

20. (B)  $\frac{1}{2} = \frac{4}{8}$   
 Only  $\frac{1}{8}$  is less than  $\frac{4}{8}$   
 $\therefore \frac{1}{8}$  is smaller than  $\frac{1}{2}$

21. (C) Perimeter of the rectangle  
 =  $13 + 5 + 13 + 5$   
 = 36 cm

22. (B)  $46 - 5 - 5 = 36$   
 The sum of their present ages is 36 years.



6 units  $\rightarrow$  36 years  
 1 unit  $\rightarrow$  x years + 6 = 6 years  
 5 units  $\rightarrow$   $5 \times 6$  years = 30 years  
 Mrs. Leena's present age is 30

23. (A) Dividend = Divisor  $\times$  Quotient + Remainder  
 =  $9 \times 79 + 3 = 711 + 3 = 714$

24. (B)  $1 \text{ kg } 250 \text{ g} - 300 \text{ g} = 1250 \text{ g} - 300 \text{ g} = 950$   
 The mass of the items in the box is 950 g.

25. (A) 1<sup>st</sup> minute it climbed = 42 cm  
 2<sup>nd</sup> minute it climbed = 55 cm  
 3<sup>rd</sup> minute it climbs = ?  
 Height of the wall = 168 cm  
 =  $168 - (42 + 55)$   
 =  $168 - 97 = 71$  cm  
 In 3<sup>rd</sup> minute the ant has to climb 71 cm to reach the top.

26. (C) Factors of 72: 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72

Sum is 30: 6 and 24, 12 and 18

$24 \times 6 = 144, 18 \times 12 = 216$

Since the product of the 2 factors is given to be 216, the 2 factors should be 12 and 18

27. (D) The greatest number formed is DCLX = 660 and the least is CDXL = 440

Difference =  $660 - 440 = 220 = \text{CCXX}$

28. (D) Smallest 6-digit number from the given options and 1 in the thousands place = 201345

29. (B) i) 3 is a factor of 32. (X)  
 ii) 20 & 32 have 3 common factors (✓)

$20 = (1, 2, 4), 5, 10, 20$

$32 = (1, 2, 4), 8, 16, 32$

- iii) 63 has only 2 factors other than 1 (X)  
 $63 = 1, 3, 7, 9, 21$  and 63

- iv) 7 is a factor of 46 (X)

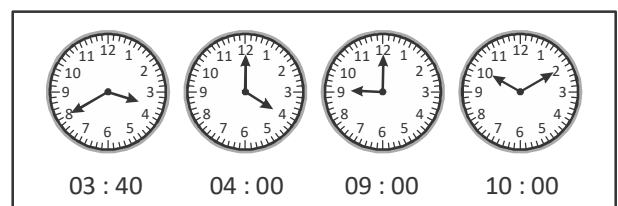
30. (C)  $2\frac{5}{6} = \frac{12+5}{6} = \frac{17}{6}$

31. (D) 9:45 pm into 24-hour clock = 21:45

32. (A) 5 bags = ₹2240  
 Costs of 1 bag =  $₹2240 \div 5$   
 = ₹448

Cost of 9 bags =  $₹448 \times 9$   
 = ₹4032

33. (C) The hands of clock intersect at right angles when the time is 9 : 00 am



34. (B) Total no. of stamps with John = 1500  
 No. of stamps given to his friend = 250  
 No. of stamps lost = 500  
 No. of stamps left

$$= \frac{500 + 250}{1500} = \frac{750}{1500} = \frac{1}{2}$$

35. (A) 1 kg 236 g = 1236 g  
 1236 g ÷ 3 = 412 g (mass of 1 box of cornflakes)  
 412 g × 2 = 824 g (mass of 1 can of baked beans)  
 824 g × 3 = 2472 g = 2 kg 472 g.

### REASONING

36. (C) **G H H J J A S H H D S S A A S J S D A S**
37. (C) Shape rotating 90° anticlockwise as you move down the columns.
38. (D) Option A has all different shapes. In option B, shaded square is smaller than unshaded square. In option C, two shaded part are there. In option D, shaded and unshaded part are equal in size.



39. (D) 11 → Eleven  
 16 → Sixteen  
 20 → Twenty  
 60 → Sixty  
 60 has minimum number of letters

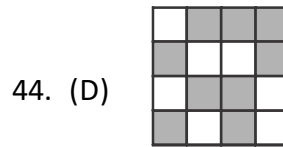
40. (B)
- |   |   |   |   |   |   |   |    |   |
|---|---|---|---|---|---|---|----|---|
| C | A | T | B | A | T | C | O  | W |
|   |   |   |   |   |   |   |    |   |
| T | 1 | C | T | 1 | B | W | 15 | C |

41. (C)
- 

42. (C) WRITER → WRTRIE  
 MONKEY → MNKYOE  
 FOREST → FRSTOE

The coded words are written by consonants followed by vowels in the same order.

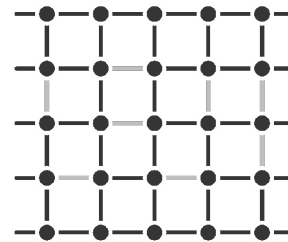
43. (B)
- |    |    |   |   |    |   |   |    |
|----|----|---|---|----|---|---|----|
| 12 | 10 | 8 | 6 | 1  | 4 | 7 | 10 |
|    |    |   |   |    |   |   |    |
| -2 |    |   |   | +3 |   |   |    |



45. (D) The rectangle is in front of the Hexagon.

### CRITICAL THINKING

46. (C) We fulfil the task if we close 8 road segments in the centre of the city.



47. (B)
- 

Numbering papers from top to bottom 1,2,3,4 respectively

If we punched at point A, 1st paper is missing

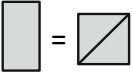



If we punched at point B, 1st paper is missing









If we punched at point C, 4th paper is missing





If we punched at point D, it covers all papers







If we punched at point E, 3rd paper is missing.

48. (D) I will inform railway police on the next station.

49. (B)  =   

  =      

=    

    =  

50. (D) According to the given statements the order of 3 members is

Sita → Jaya → Lasya (Ram may occupy first and fourth positions)

Hence, Jaya is not definitely in 1st and 4th position in line.

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