



Unified International  
Mathematics Olympiad

**UNIFIED INTERNATIONAL MATHEMATICS OLYMPIAD**

**CLASS - 5**

**Question Paper Code : 40109**

**KEY**

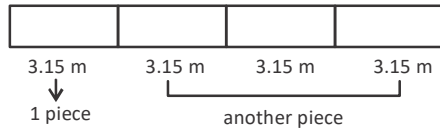
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
A	A	D	B	A	D	C	A	D	C
<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
C	B	C	C	B	B	D	B	D	C
<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>
D	C	D	C	D	C	D	B	B	A
<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>
B	D	B	A	D	D	C	B	A	C
<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>
B	D	C	D	D	B	D	C	D	C

**SOLUTIONS**

**MATHEMATICS**

- |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>01. (A) <math>97580 - 95780 = 1800</math></p> <p>02. (A) <math>\frac{180}{4} \times 9 = 405</math></p> <p>03. (D) I can be subtracted from v, x, c</p> <p>04. (B) Smallest 6 digit odd number = 100001<br/>Largest 4 digit even number = 9998<br/><math>100001 - 9998 = 90003</math></p> <p>05. (A) 5 lakhs = one half of a million</p> <p>06. (D) 6 : 45 a.m. – 6 : 45 p.m. = 12 hours<br/>6 : 45 p.m. – 7 : 25 pm = 40 min</p> | <p>07. (C) in the international system, the place value of an 8 digit number starts with then million.</p> <p>08. (A) Any number divided by zero is undefined</p> <p>09. (D) Except option (D) remaining all half shaded.</p> <p>10. (C) Trapezium</p> <p>11. (C) 1 million = 1000000<br/><math>1000000 - 50 = 999950</math></p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

12. (B)



13. (C)  $\frac{1}{3}$  (boys) = 100

$\frac{1}{2}$  (girls) = 200

boys = 300

girls = 400

boys + girls = 400 + 300 = 700

14. (C) (A)  $A = 4 \text{ cm}^2$

$P = 4 \times 2 \text{ cm} = 8 \text{ cm}$

(B)  $A = 9 \text{ cm}^2$

$P = 4 \times 3 \text{ cm} = 12 \text{ cm}$

(C)  $A = 16 \text{ cm}^2$

$P = 4 \times 4 \text{ cm} = 16 \text{ cm}$

(D)  $A = 36 \text{ cm}^2$

$P = 4 \times 6 \text{ cm} = 24 \text{ cm}$

15. (B) Intersecting lines are never parallel because parallel lines do not meet at any point

16. (B)  $13 \times 24 = 312$

$16 \times 21 = 336$

$336 - 312$

$= 24$

17. (D) Ninety nine million = 99,000,000

18. (B) There are 6 common factors of 36 & 48

i.e, 1, 2, 3, 4, 6, 12

19. (D) Cube is a solid figure with 6 square surfaces

20. (C) The two numbers together add up to 1476890 & one number is 12000 more than the other.

Dividing the total into two equal parts & then adding 12,000 to one part gives the greater number.

$$\frac{1476890 - 12000}{2} + 12000 = 744,445$$

21. (D) (A)  $\frac{1}{5}(0.2) = 0.2$

(B)  $\frac{1}{4}(0.25) = 0.25$

(C)  $\frac{1}{4}(0.25) < 0.5$

(D)  $\frac{1}{4}(0.25) > 0.2$

22. (C) (A)  $\frac{1}{5} \times \frac{15}{10} = \frac{3}{10}$

(B)  $\frac{3}{6} \times \frac{9}{12} = \frac{9}{24}$

(C)  $\frac{8}{13} \times \frac{39}{16} = \frac{3}{2}$

(D)  $\frac{8}{11} \times \frac{33}{4} = 6$

23. (D) Flour

$5 \text{ kg} - 2.25 \text{ kg} = 2.75 \text{ kg}$

Sugar

$3.5 \text{ kg} - 1.75 \text{ kg} = 1.75 \text{ kg}$

24. (C) A day has 24 hours &  $\frac{6}{24} \times 100 = 25\%$

6 hours is 25% of a day

25. (D) Prime numbers between 40 & 50 are 41, 43, 47

Prime numbers between 50 & 60 are 53, 59

Prime numbers between 70 & 80 are 71, 73, 79

26. (C) LCM of 50, 70, 30 is 1050

27. (D)  $789 \times 832 = 656448$

$6 \times 100000 + 5 \times 10000 + 7000 - 552 = 656448$

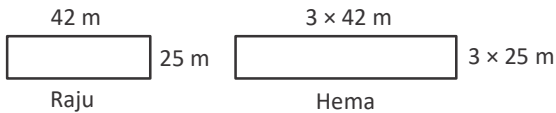
28. (B) Gagan mass = 46.5 kg

Krishna mass =  $\frac{4}{5} \times 46.5 \text{ kg}$

37.2 kg

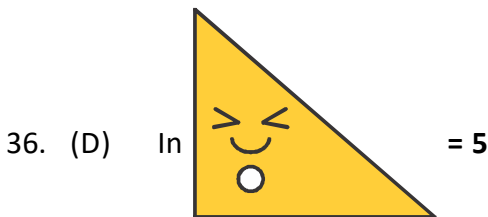
$46.5 \text{ kg} - 37.2 \text{ kg} = 9.3 \text{ kg}$

29. (B) Rectangle is a figure that has opposite sides that are equal in length. The two pairs of sides are 4 meters & 2 meters long indicating that is rectangle
30. (A)  $50000 + 50000 + 50 + 5 + 5000 = 1,05,055$
31. (B) 380, 381, 382, 383, 384, 385, 386, 387, 388, 389
32. (D)  $0.03 \times 0.03 \times 0.003 = 0.0000027$
33. (B)

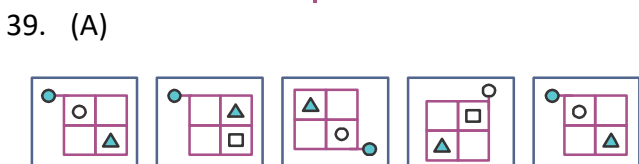
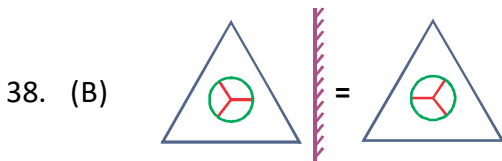


34. (A) Two prime numbers whose difference is 2 are called twin primes
35. (D) There can be an infinite number of circles drawn with the same centre.

**REASONING**

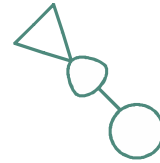
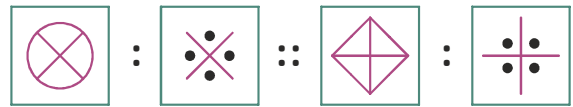


37. (C)  $T + 2 = V$   
 $R + 2 = T$   
 $E + 2 = G$   
 $E + 2 = G$   
 $L + 2 = N$   
 $E + 2 = G$   
 $A + 2 = C$   
 $F + 2 = H$



40. (C) 20

41. (B)

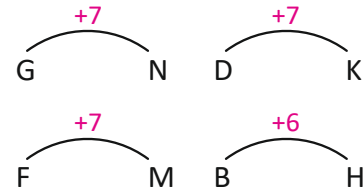


42. (D)

43. (C) To find Amit's rank from the bottom, use the formula

$$\begin{aligned} \text{Rank from bottom} &= \text{Total students} - \text{Rank from top} + 1 \\ &= 35 - 7 + 1 = 29 \end{aligned}$$

44. (D)



45. (D) The inner figure is inverted from the larger figure.

**REASONING**

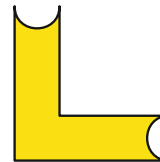
46. (B) John } brothers      Surya } brothers  
 Madhu }                      Karan }  
 Surya } father and son  
 John }                              }

Karan is Madhu's uncle.

47. (D)

1	2	3	4	5
P	T	R	Q	S

48. (C)



49. (D)  $4A + 1P = 3P$   
 $4A = 2P$   
 $1P = 2A$
50. (C)  $8 - 1 = 7$   
 $7 \times 4 + 1 = 29$

The answer is 29 students.