



**UNICUS
OLYMPIADS**

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Sample Paper



Class 5

Unicus Global Mathematics Olympiad (UGMO)

Time: 60 minutes

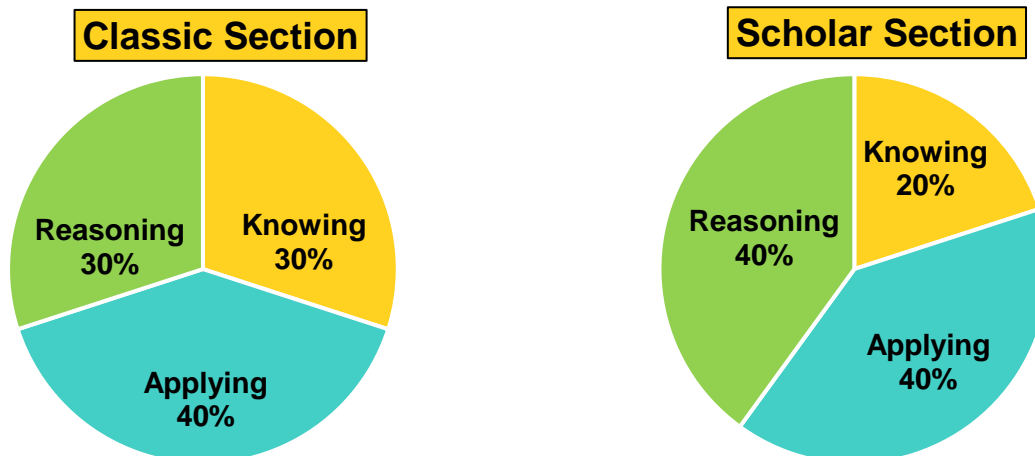
Pattern and Marking Scheme			
Section	Total Questions	Marks per Question	Total Marks
Classic Section	30	1	30
Scholar Section	15	2	30
Grand Total	45		60

Unicus Global Mathematics Olympiad (UGMO)

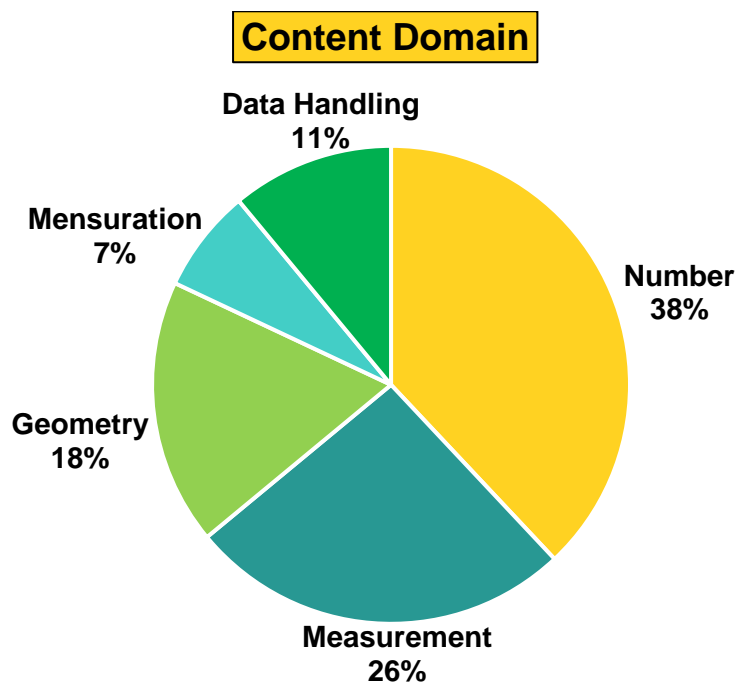
The **Unicus Global Olympiad** is organised around two dimensions:

1. Content dimension, specifying the subject matter domains to be assessed
2. Cognitive dimension, specifying the thinking processes to be assessed

Target percentages of the question paper devoted to cognitive domains



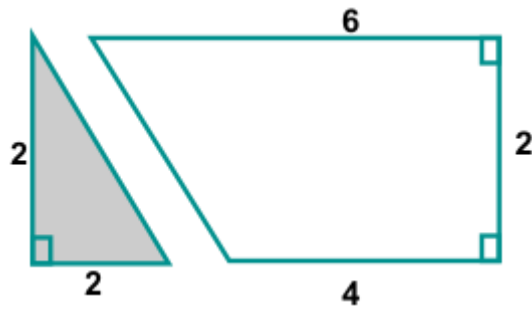
Target percentages of the question paper devoted to content domains



For more details, visit <https://www.unicusolympiads.com/>.

Cognitive Domain: Applying	Content Domain: Geometry
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26. How many triangles of the shape and size of the shaded triangle can the trapezoid above be divided into?



- | | |
|------|------|
| a. 2 | b. 3 |
| c. 5 | d. 6 |

Cognitive Domain: Knowing	Content Domain: Geometry
----------------------------------	---------------------------------

27. Which of the following is a mirror image of the following picture?



- | | |
|-----------------------|-----------------------|
| <p>a. </p> <p>c. </p> | <p>b. </p> <p>d. </p> |
|-----------------------|-----------------------|

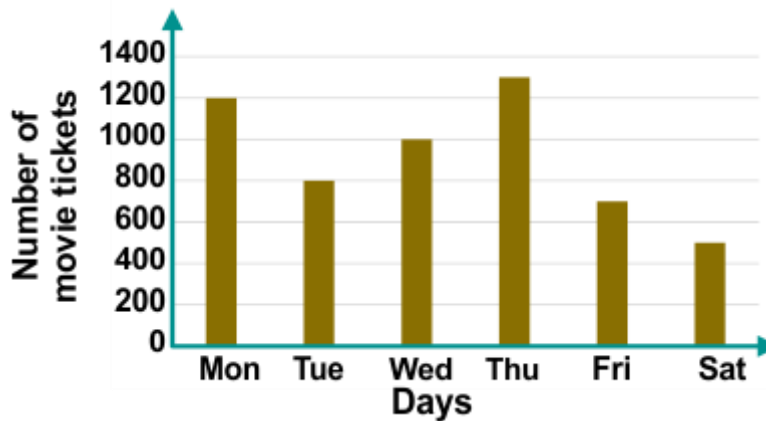
Cognitive Domain: Knowing	Content Domain: Geometry
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28. Diana drew an equilateral triangle. How many lines of symmetry can she draw in that triangle?

- | | |
|------|------|
| a. 1 | b. 2 |
| c. 3 | d. 4 |

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Directions (29-30): The bar graph shows the movie ticket collection in a week by the theatre. Study the graph carefully and answer the following question:



Cognitive Domain: Applying

Content Domain: Data Handling

29. If the cost of a ticket is \$10, what was the collection of the week?

- a. \$55,000
- b. \$52,000
- c. \$5,500
- d. \$500,000

Cognitive Domain: Applying

Content Domain: Data Handling

30. By how much is the average sales of Monday, Tuesday and Wednesday more than the average sales of Thursday, Friday and Wednesday?

- a. 100
- b. 200
- c. 50
- d. 0

Scholar Section (Each Question is 2 Marks)

Cognitive Domain: Knowing

Content Domain: Number

31. Find the number which is 600000 more than sum of the numbers 674545646 and 2124402.

- a. 477852005
- b. 566320058
- c. 599500587
- d. 677270048

Cognitive Domain: Applying

Content Domain: Number

32. A school organised a picnic to Disneyland in the winter break, which was attended by 80 students of grade 3 and 72 students of grade 4. If $\frac{2}{5}$ th of the students of grade 3 were girls and $\frac{3}{12}$ th of the students of grade 4 were girls, what was the total number of girls that went for the picnic?
- a. 48
b. 50
c. 102
d. 142
-

Cognitive Domain: Reasoning

Content Domain: Number

33. Sandra baked 147 cookies on Monday and 1068 cookies on Tuesday. She then sold $\frac{1}{5}$ th of the cookies to her best friend and $\frac{2}{3}$ rd of the remaining to her neighbour. How many cookies did she sell to her neighbour?
- a. 648
b. 750
c. 810
d. 972
-

Cognitive Domain: Knowing

Content Domain: Number

34. The teacher asked the children to solve $\frac{1}{125}$. Veronica was the 1st child to give the correct answer. What is the answer she gave?
- a. 0.008
b. 0.08
c. 0.001
d. 0.01
-

Cognitive Domain: Applying

Content Domain: Number

35. Brett got on an elevator and rode up 10 floors. Next, he rode down 7 floors. After that, he went up 4 floors. Finally, he went down 6 floors. When he got off the elevator, he was on the 11th floor. What floor was he on when he started his ride?
- a. 4th floor
b. 10th floor
c. 12th floor
d. 14th floor
-

Cognitive Domain: Applying

Content Domain: Measurement

36. Archie's car has a fuel tank that can hold 30 L of petrol. The car consumes 6.5 L of petrol for every 50 km driven. He started his trip to Disneyland with a full tank and travelled 175 km. How much fuel was left in them when they reached Disneyland?
- a. 22.75 L
b. 550 mL
c. 7250 mL
d. 72.5 L
-

Cognitive Domain: Knowing

Content Domain: Measurement

37. Isaac was asked to convert 80 hours 120 minutes 7200 seconds into days. What will be the correct answer?
- a. 8 days
b. 7 days
c. $7\frac{1}{2}$ days
d. $\frac{2}{3}$ days

Cognitive Domain: Reasoning

Content Domain: Measurement

38. To ensure that he is not late for an exam, Rocky's teacher asked him to set the alarm for Monday at 11 a.m. He set it correctly at 1 a.m. on Sunday but wasn't aware of the fault in the clock. The clock gained 20 minutes for every 24 hours. What would be the actual time when the alarm would go off?
- a. 28 minutes 20 seconds before 10 am
b. 31 minutes 40 seconds past 10 am
c. 28 minutes 20 seconds past 11 am
d. 31 minutes 40 seconds past 11 am

Cognitive Domain: Reasoning

Content Domain: Geometry

39. Jason's dog was tied to a pole and was facing North. It spun $\frac{2}{3}$ rd of a right angle, then it made a $\frac{1}{5}$ th of a right angle turn in the same direction and then $\frac{1}{9}$ th of straight angle again in the same direction. At what angle was the dog from the pole by the end of making all the turns?
- a. 80°
b. 98°
c. 140°
d. 78°

Directions (40-42): Study the given passage and answer the following questions:

Mr. Thomas is planning to redesign his rectangular garden which currently has a length of 8 m and a width of 6 m. He wants to increase the area of his garden by adding 2 m to both the length and the width. Once the expansion is complete, he plans to surround the entire garden with a decorative fence. Additionally, Mr Thomas is considering splitting the garden into two equal parts by adding a fence right through the middle from one side to the other, parallel to the width. He is curious about the new dimensions, the amount of fencing required, and how the area will be divided.

Cognitive Domain: Applying

Content Domain: Mensuration

40. How much fence material is needed to surround the entire garden after the expansion? (Assume he does not need a gate)
- a. 32 m
b. 36 m
c. 42 m
d. 48 m

Cognitive Domain: Applying

Content Domain: Data Handling

45. What is the number of students who did choose the science and Art stream?

- a. 486
c. 522

- b. 512
d. 586

Answer Key

1.	d	2.	b	3.	c	4.	b	5.	d	6.	c	7.	b
8.	a	9.	d	10.	b	11.	a	12.	a	13.	b	14.	b
15.	c	16.	a	17.	a	18.	b	19.	c	20.	d	21.	b
22.	c	23.	a	24.	b	25.	d	26.	c	27.	a	28.	c
29.	a	30.	d	31.	d	32.	b	33.	a	34.	a	35.	b
36.	c	37.	c	38.	b	39.	b	40.	b	41.	c	42.	a
43.	a	44.	c	45.	d								