UNICUS OLYMPIADS

Sample Paper

Class 6

Unicus Mathematics Olympiad (UMO)

Section	Total Questions	Marks per Questions	Total Marks
Classic Section	40	1	40
Scholar Section	10	2	20
Grand Total	**50**		**60**

Classic Section (Each Question is 1 Mark)

1. A bag of flour weighed 54.546 kg at the beginning of the week. After a week, it weighed 19.435 kg. How much flour was used in the entire week?

   a. 31.555 kg
   b. 35.111 kg
   c. 39.145 kg
   d. 43.453 kg

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2. Choose the correct number name for the given expanded form:
   900000000 + 5000000 + 400000 + 2000 + 100 + 50 + 9

   a. Ninety billion fifty-four million two thousand one hundred and fifty-nine
   b. Nine hundred million five hundred forty-two thousand one hundred and fifty-nine
   c. Ninety million fifty-four thousand twenty-one hundred and fifty-nine
   d. Nine hundred five million four hundred two thousand one hundred and fifty-nine

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3. Find the difference between the smallest 6-digit number formed by the digits 5, 0 and 6, and the greatest 5-digit number formed by the digits 2, 1, 7 and 4: (Every digit should come at least once)

   a. 5,75,729
   b. 5,55,403
   c. 4,22,585
   d. 4,85,085

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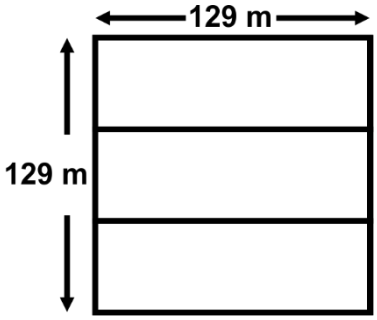
4. A square field with each side measuring 129 m was divided among 3 brothers equally as shown in the given figure. Find the perimeter of each part:



   a. 516 m
   b. 344 m
   c. 172 m
   d. 240 m

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5. What angle is made by the hour hand of the clock when it goes from 3 o'clock to 6 o'clock?

   a. Straight angle
   b. Right angle
   c. Acute angle
   d. Obtuse angle

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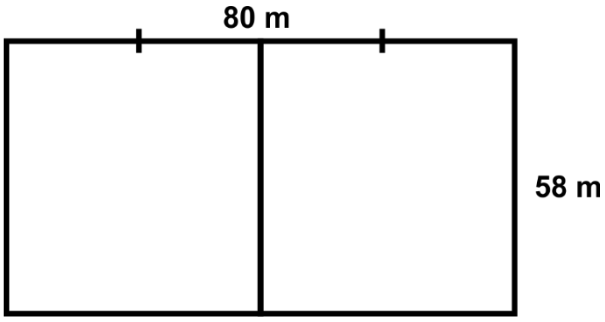
6. In the given figure, the larger rectangle measures 58 m x 80 m. It has been divided into two equal parts as shown in the figure. Which of the given statements is correct?



a. The perimeter of the bigger rectangle is 160 m.
b. The perimeter of the smaller rectangle is half of the perimeter of the bigger rectangle.
c. The perimeter of the bigger rectangle is 80 m more than the perimeter of the smaller rectangle.
d. The perimeter of the smaller rectangle is 232 m.

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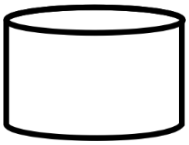
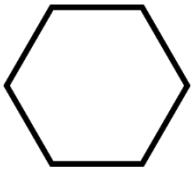
7. Choose the option in which the given figure has maximum line of symmetry:

a. 

b. 

c. 

d. 

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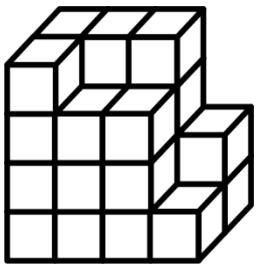
8. Find the volume of the given shape, if each cube has an edge of 9 cm:



a. 74,160 cm^3
b. 17,230 cm^3
c. 18,225 cm^3
d. 29,844 cm^3

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9. The maximum temperature in a city for 5 days was 34°C, 30°C, 37°C, 29°C and 36°C. Find the average of these temperatures:

a. 32°C
b. 31.9°C
c. 35°C
d. 33.2°C

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10. Arrange the following numbers in ascending order:
-83, 0, -1/5, 92%, 46

a. 0 < -1/5 < 46 < -83 < 92%
b. -83 < -1/5 < 92% < 0 < 46
c. 0 < -1/5 < -83 < 46 < 92%
d. -83 < -1/5 < 0 < 92% < 46

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11. The dance club at the school meets every eighteen days, the art club meets after every thirty-two days and the reading club meets after every forty-eight days. If they all met on 1st January, then after how many days will they all meet again simultaneously?

a. 288 days
b. 340 days
c. 187 days
d. 98 days

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12. Which of the following numbers has horizontal line of symmetry?

a. 580
b. 680
c. 910
d. 80

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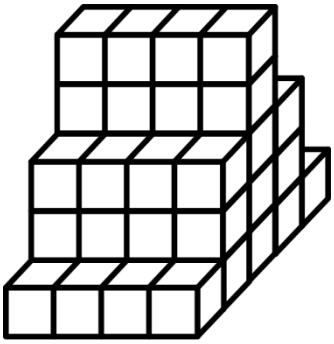
13. The given shape is made using small cubical blocks of side 6 cm. Find the volume of the whole shape:



a. 46,146 cm^3
b. 21,780 cm^3
c. 52,264 cm^3
d. 11,232 cm^3

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14. Find the values of y in the given table, using the equation given below:
$y = 58 – 3x/2$

x	6	8	10
y			

a. 75, 36, 22
b. 28, 42, 22
c. 17, 48, 87
d. 49, 46, 43

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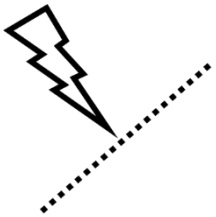
15. Choose the correct image if we flip the given figure along the line:



a. 

b. 

c. 

d. None of the above

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16. Which of the given options is correct?

a. -59 x 108 >137 x 9
b. -279 x 3738 > -1277 x -283
c. -732 x 928 > 1277 x 283
d. 456 x 273 > -267 x 873

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17. A wire of length 1 m 75 cm is bent to form a rectangle of length 45 cm. Find the area of the rectangle thus formed:

a. 6525 cm^2
b. 2025 cm^2
c. 1912.5 cm^2
d. 2000 cm^2

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18. What is the number which when divided by 78, 35 and 8 leaves a remainder 15 in each case?

a. 10935
b. 10000
c. 10915
d. 9000

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19. 10 L 500 mL of juice has to be divided equally among 7 people. How much juice will each person get?

a. 1 L 500 mL
b. 1 L 150 mL
c. 2 L
d. 2 L 150 mL

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20. Which of the following has exactly three lines of symmetry?

a. M
b. Equilateral triangle
c. N
d. Line segment

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21. Fill in the blank:
_____ m - 75 cm = 4.25 m

a. 0.5
b. 5
c. 50
d. 500

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22. The weight of a piece of gold is 0.2354 kg and the cost of gold is $2875.50 per gram. If 9.56 gm is separated for a piece of gold, then find the cost of the remaining gold.

a. $646577.42
b. $646627.42
c. $646587.42
d. $649402.92

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23. George ate 4/7 portion of rice and 3/4 of pulses. Which portion did he eat more and by how much?

a. Pulses, 5/28
b. Pulses, 5/8
c. Rice, 1/10
d. Rice, 5/28

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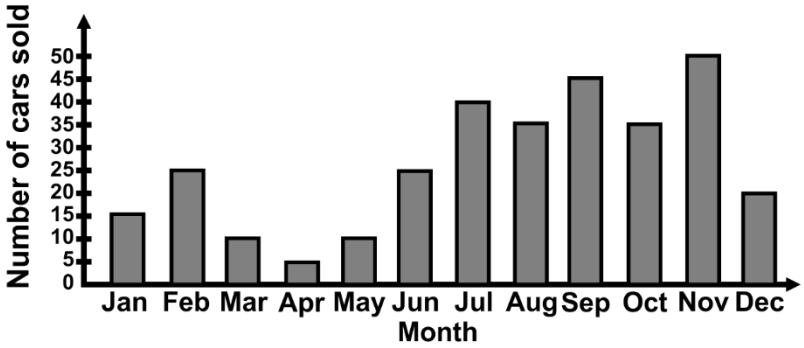
24. The given bar graph shows the number of cars sold from January to December. How many cars were sold in the last quarter of the year?



a. 280
b. 130
c. 140
d. 105

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25. What should be subtracted from the sum of 1.48 and 1.368 so that the difference is 1?

a. 2.848
b. 2.144
c. 1.848
d. 0.848

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26. How many glasses of water are required to fill the one-litre water bottle, if the capacity of one glass is 25 mL?

a. 20
b. 40
c. 60
d. 80

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27. A shopkeeper mixed 5.3 kg of almonds 2100 g of raisin, 2.2 kg of cashews and packed the mixture equally into two dozen packets. What is the weight of each packet?

a. 450 g
b. 500 g
c. 300 g
d. 400 g

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28. What is the sum of the place values of 6 in the number 68,646?

a. 60,606
b. 60,066
c. 66,006
d. 60,006

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29. Alice goes to the stationary shop every day and buys 7 crayons and 3 pens. How many crayons and pens she would have bought in January?

a. 217, 90
b. 210, 93
c. 217, 93
d. 210, 90

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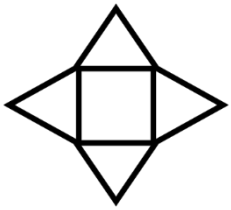
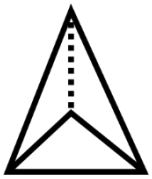
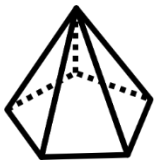
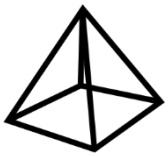
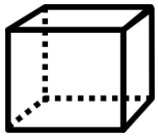
30. What will be the resultant three-dimensional object?



a. 

b. 

c. 

d. 

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31. A box has 12 donuts. Find the weight of each donut if the weight of the empty box is 580 g and the weight of the box with its contents is 2 kg 668 g:

a. 188 g
b. 174 g
c. 224 g
d. 248 g

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32. A man travels 24 km in a day. Out of which he covers one-sixth of his journey by auto, three-fourth of the remaining by bus and the rest by foot.
How much distance does he cover by bus?

a. 4 km
b. 5 km
c. 10 km
d. 15 km

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33. John is asked to sell Christmas grand carnival tickets by his school in his neighbourhood. If the cost of each adult ticket is $150 and child ticket up to the age of 12 years is $125, how much money will he get from Betty who buys 4 adult tickets and 2 child tickets?

a. $850
b. $950
c. $1050
d. $1170

---

34. Sarah got $5400 as her salary out of which she spends one-sixth in buying groceries and two-fifth in buying clothes. How much amount will be left with her?

a. $2340
b. $2420
c. $2470
d. $2530

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35. In the year 2004, Kate got $2305.80 as her pocket allowance. Her pocket money per day was:

a. $6.30
b. $6.31
c. $6.32
d. $1.5

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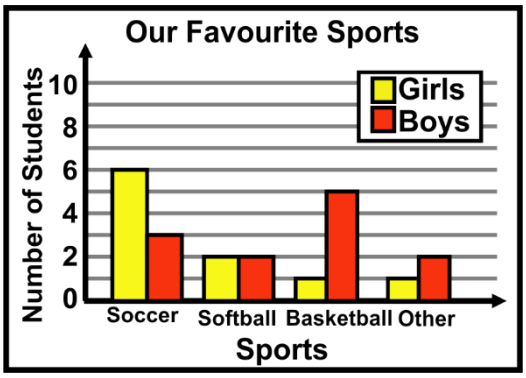
36. Based on the given graph, how many more boys than girls like basketball as their favourite game?



a. 3
b. 4
c. 5
d. 6

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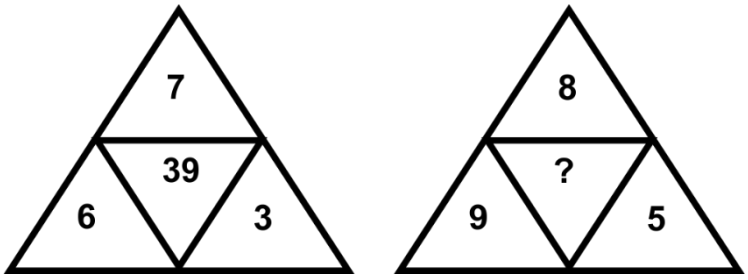
37. Find the missing number if the same relationship follows in both the figures:



a. 53
b. 57
c. 64
d. 67

---

38. Which of the following is not a valid Roman Numeral?

a. MMMDCXLII
b. MMMCCLXXXIV
c. MMDCCCXCIV
d. MMMDDCII

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39. Fill in the blank:
MDCCCXVII ÷ LXXIX = _____

a. XIV
b. XXIII
c. XXVII
d. XXXVI

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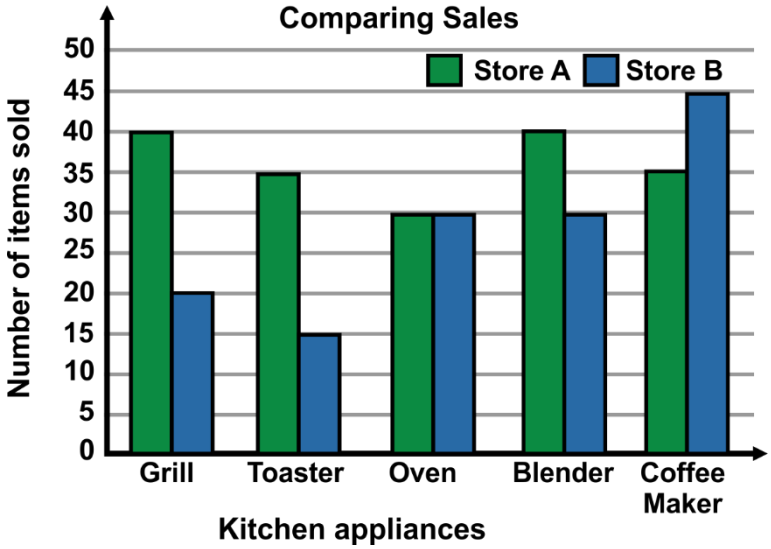
40. Based on the given graph which kitchen appliance is sold more in Store B in comparison to Store A?



a. Blender
b. Toaster
c. Coffee Maker
d. Grill

Scholar Section (Each Question is 2 Marks)

41. Aman, Anna and Tina are participating in the school race. Anna completes a lap in 2 minutes 35 seconds, Aman completes a lap in 4 minutes and Tina completes a lap in one minute and 30 seconds. If they all started at the same time, then after how long will they meet again?

a. 372 minutes
b. 360 minutes
c. 420 minutes
d. 590 minutes

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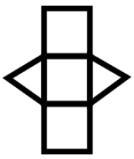
42. Which one of the given options is a net for hexagonal prism?

a. 

b. 

c. 

d. 

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43. Sam had 15000$ with him. His mother gave him some more money. He spent $1890 on car, $1735 on video games and $2655 on painting. He is now left with $13984. How much money did his mother give him?

a. $6,124
b. $7,349
c. $5,264
d. $5,184

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44. The given figures are made up of same-sized squares. If the area of Figure A is 16337 cm^2, then find the perimeter of Figure B:

Figure A

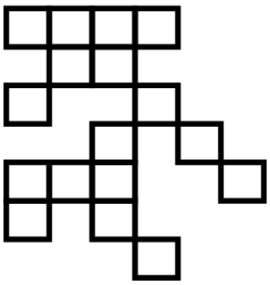
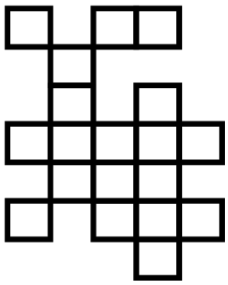


Figure B



a. 1759 cm
b. 1240 cm
c. 1320 cm
d. 1540 cm

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45. Which of the given statement is false?

a. A cuboid has 12 straight edges and 6 flat faces
b. A cone has 1 curved surface and 1 flat surface
c. A cylinder has 1 curved surface and 1 flat surface
d. A sphere has no flat face or straight edges. It only has one curved surface.

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46. Sarah prepared 250 plates of burger and 185 plates of chips to sell at school. She sold the burger at 3$ each and the chips 2$ each. If 128 plates of burger remained unsold but all the chips were sold, then how much did Sarah earn?

a. 1120$
b. 799$
c. 736$
d. 666$

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47. Sophie goes to a post office to post letters. The postal rate depicted are as below:
Letter weighing:
i. 20 g or less - 5.00$
ii. Per every additional 20 g - 2.00$

Sophie wants to send two letters weighing 20 g and 30 g respectively. How much postal charge does she have to pay?

a. 12$
b. 15$
c. 21$
d. 25$

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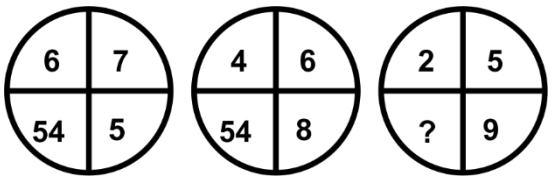
48. What will come in place of ?



a. 64
b. 56
c. 48
d. 54

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49. Ajay had 85 candies. He gave two-seventeenth to Anuj and out of the remaining he gave one-fifth to Prachi. How many candies were left with Ajay?

a. 36
b. 55
c. 60
d. 75

---

50. There were some bottles containing 5 L of Coke, Pepsi and Frooti each at a party. After the party, there was 250 mL of Coke, 325 mL of Pepsi and 420 mL of Frooti left in the bottles. How much Coke, Pepsi and Frooti were consumed in the party, respectively?

a. 4850 mL, 4275 mL, 4580 mL
b. 4850 mL, 4275 mL, 4380 mL
c. 4750 mL, 4275 mL, 4380 mL
d. 4750 mL, 4675 mL, 4580 mL

Answer Key

1.	b	2.	d	3.	c	4.	b	5.	b	6.	c	7.	d
8.	c	9.	d	10.	d	11.	a	12.	d	13.	d	14.	d
15.	b	16.	d	17.	c	18.	a	19.	a	20.	b	21.	b
22.	d	23.	a	24.	d	25.	c	26.	b	27.	d	28.	a
29.	c	30.	c	31.	b	32.	d	33.	a	34.	a	35.	a
36.	b	37.	d	38.	d	39.	b	40.	c	41.	a	42.	c
43.	c	44.	b	45.	c	46.	c	47.	a	48.	c	49.	c
50.	d												