UNICUS OLYMPIADS

Sample Paper

Class 5

Unicus Mathematics Olympiad (UMO)

Section	Total Questions	Marks per Questions	Total Marks
Classic Section	30	1	30
Scholar Section	10	2	20
Grand Total	**40**		**50**

Classic Section (Each Question is 1 Mark)

1. Fill in the blank:
   7857 - 1256 = _____ + 3780

   a. 3790
   b. 2821
   c. 1980
   d. 1289

---

2. The height of Sarah is twice the height of her sister. If her sister's height is 74 cm, then what is Sarah's height?

   a. 138 cm
   b. 148 cm
   c. 158 cm
   d. 168 cm

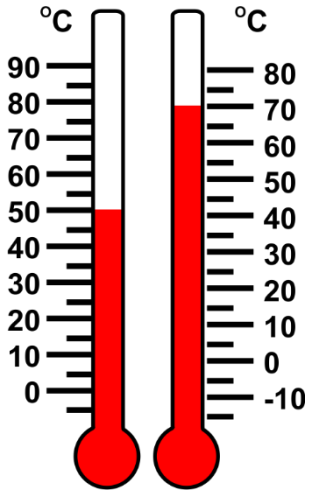
---

3. Jasmine bought a pair of socks for $70 and a pair of gloves for $120. If she gives $200 to the shopkeeper, then how much money will she get back?

   a. $5
   b. $10
   c. $15
   d. $20

---

4. What is the difference in the temperatures shown in the thermometers?



   a. 10ºC
   b. 20ºC
   c. 30ºC
   d. 40ºC

---

5. Which of these is an equilateral triangle?

   a. 110° + 60° + 10°
   b. 60° + 60° + 60°
   c. 40° + 60° + 80°
   d. 80° + 50° + 50°

---

6. Aanya's dance class starts at the time shown in the clock and lasts for 20 minutes. At what time will her dance class get over?

a. 11:05 a.m.
b. 11:10 a.m.
c. 10:05 a.m.
d. 10:10 a.m.

---

7. Find the perimeter of a rectangular field whose length and breadth are 14 m and 6 m respectively:

a. 20 m
b. 40 m
c. 20 m^2
d. 40 m^2

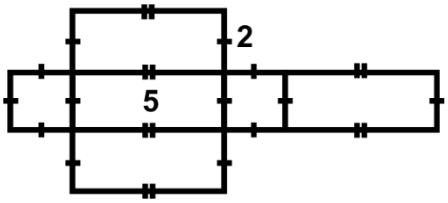
---

8. Fill in the blank:
12, 13, 16, 18, 20, 23, ___, ____

a. 24, 27
b. 24, 28
c. 25, 28
d. 25, 29

---

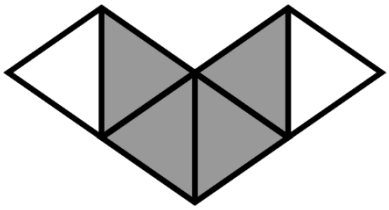
9. Find the perimeter of the given figure:



a. 108 units
b. 80 units
c. 54 units
d. 40 units

---

10. What fraction of the figure is shaded?



a. 1/3
b. 2/3
c. 1/6
d. 5/6

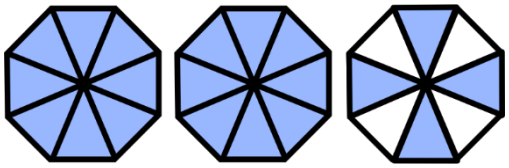
---

11. An aeroplane can accommodate 420 passengers. If 315 seats are booked in the plane, then what fraction of the seats in the flight are vacant?

a. 3/4
b. 1/4
c. 1/2
d. 23/28

---

12. Express the shaded part of the given picture as a mixed fraction:



a. $2\frac{1}{5}$
b. $2\frac{1}{4}$
c. $2\frac{1}{2}$
d. $4\frac{2}{8}$

---

13. Find the difference between the greatest and the smallest 5-digit number using the digits 1, 0, 8 (each digit should be used):

a. 11,180
b. 81,000
c. 78,802
d. 88,888

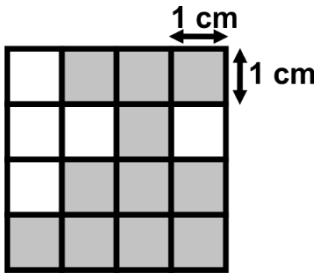
---

14. What will be the answer when 495 is subtracted from the smallest 5-digit number?

a. 15000
b. 99999
c. 10495
d. 9505

---

15. What is the perimeter of the shaded figure given below?



a. 11 cm
b. 16 cm
c. 20 cm
d. 24 cm

---

16. Mrs Sarah used 150 g of sugar from a packet to make a cake and another 100 g of sugar to make cookies. Altogether she had used 1/2 packet of sugar. Find the original mass, in, g of the packet of sugar:

a. 500
b. 250
c. 375
d. 125

---

17. The total strength of a class is 36 students. If three-fourths of the students are taking an examination from the class, then how many students are not taking the examination?

a. 9
b. 12
c. 24
d. 27

---

18. Smallest 6-digit number formed by using 5, 0, 3, 2, 6, 1 using each digit once is:

a. 032615
b. 102356
c. 102365
d. 012356

---

19. If Peter buys 7 pens every day, how many pens will he buy in the month of January?

a. 210
b. 217
c. 196
d. 203

---

20. 600 candles need to be packed in boxes of 30 each. How many boxes will be needed?

a. 30
b. 25
c. 20
d. 15

---

21. Henry has four times the amount of money that Andrew has. If Andrew has $575 with him, what is the amount of money that Henry has?

a. $2180
b. $2220
c. $2270
d. $2300

---

22. John bought 5 shirts and 7 pairs of trousers at the cost of $230 and $310 each respectively. How much money did he pay at the shop?

a. $3080
b. $3120
c. $3320
d. $3520

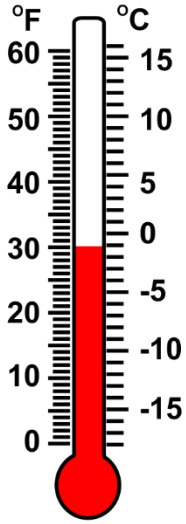
---

23. A train departed at 8:20 a.m. from the station on Saturday to reach its destination in 26 hours and 35 minutes. On which day and at what time will it reach its destination?

a. Saturday, 10:55 a.m.
b. Saturday, 10:55 p.m.
c. Sunday, 10:55 a.m.
d. Sunday, 10:55 p.m.

---

24. Sophie wants to bake a cake at four times of the temperature as shown in the thermometer. At what temperature will she bake the cake?



a. 90ºF
b. 100ºF
c. 120ºF
d. 150ºF

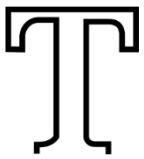
---

25. Which shape is absent in the picture?

a. Rectangle
b. Triangle
c. Circle
d. Pentagon

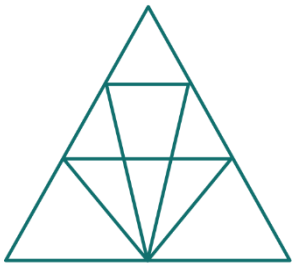
---

26. Which of the following is a closed figure?

a. 
b. 
c. 
d. 

---

27. Find the number of triangles in the given figure.



a. 18
b. 20
c. 24
d. 30

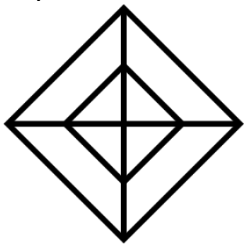
---

28. Fill in the blank:
Roman numeral for 472 is _____

a. CDLXII
b. CDLXX
c. CDLXXII
d. CDLXIII

---

29. Count the number of triangles in the picture:



a. 12
b. 16
c. 20
d. 22

---

30. Joseph makes 5 rounds of a rectangular field of dimensions 15 m × 9 m. Find the total distance covered by him:

a. 48 m
b. 96 m
c. 240 m
d. 280 m

Scholar Section (Each Question is 2 Marks)

31. Which of the following statements is incorrect?
A. 4 thousands 7 hundreds 3 tens and 4 ones is 4734
B. The smallest 4-digit number formed using the digits 0, 1, 6 and 7 without repeating the digits is 1076
C. The place value of 3 in the number 1378 is 300
D. 2180 is an even number

a. A
b. B
c. C
d. D

32. Olivia requires 7 m 38 cm of wire to fence her garden. If she purchased a wire of length 9 m 72 cm, how much of wire will be left after she fences her garden completely?

a. 2 m 34 cm
b. 2 m 56 cm
c. 2 m 72 cm
d. 2 m 88 cm

33. Match the following:

Column A		Column B	
p.	James had $280. His father gave him $500. How much money does he have now?	i.	72
q.	Danny bought 216 toffees for his birthday. If he gave 3 toffees to each of his friends, then find the number of friends that he gave toffees to:	ii.	1711
r.	In an amusement park, there were 890 men, 821 women, and 634 children. Find the number of adults in the amusement park:	iii.	780

a. p - ii, q - i, r - iii
b. p - ii, q - iii, r - i
c. p - iii, q - ii, r - i
d. p - iii, q - i, r - ii

34. 19, x, 29, 31, y, 41, 43 are a list of prime numbers in ascending order. The value of x + y is:

a. 60
b. 37
c. 23
d. 21

35. 8 poles are placed in a straight line at an equal distance apart. The distance between the first and the last pole is 5.6 km. Find the distance, between the first pole and the second pole:

a. 800 m
b. 700 m
c. 80 m
d. 70 m

36. Which of the following images shows 1/8 for the shaded part?

a. 
b. 
c. 
d. 

37. Rachel purchased 5 L coke bottle to serve to her guests. If there were 7 guests and she served 250 mL of coke to each guest, then how much coke was left in the bottle?

a. 2 L 500 mL
b. 2 L 750 mL
c. 3 L 250 mL
d. 3 L 750 mL

---

38. Which of the following is the maximum in value?

a. 14 thousands 13 hundreds 12 tens 14 ones - 11 thousands 5 hundreds 11 tens 15 ones
b. 7 thousands 15 hundreds 11 tens 12 ones + 4 thousands 6 hundreds 9 tens 17 ones
c. 15 thousands 11 hundreds 10 tens 12 ones - 3 thousands 4 hundreds 11 tens 18 ones
d. 9 thousands 13 hundreds 18 tens 22 ones + 2 thousands 15 hundreds 14 tens 19 ones

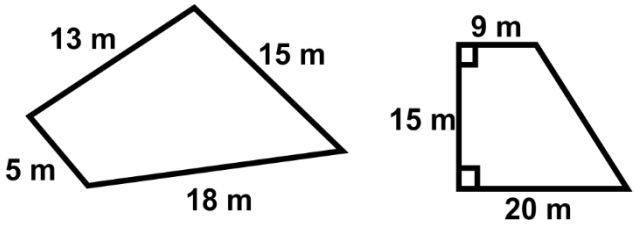
---

39. A train takes 9 hours and 40 minutes to travel from one destination to another. A plane takes one-fourth of the time taken by the train to travel between the same two destinations. What is the time taken by the plane?

a. 1 hour and 50 minutes
b. 1 hour and 55 minutes
c. 2 hours and 15 minutes
d. 2 hours and 25 minutes

---

40. Find the missing side if perimeter of both the figures is same:



a. 9 m
b. 8 m
c. 7 m
d. 6 m

Answer Key

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