



UNICUS OLYMPIADS

Sample Paper (2020-21)

Class 8

Unicus Mathematics Olympiad



Section – Class* <small>*Syllabus covered</small>	Total Questions	Marks per Questions	Total Questions
Classic Section – Class 7	28	1	28
Classic Section – Class 6	12	1	12
Scholar Section – Class 7	7	2	14
Scholar Section – Class 6	3	2	6
Grand Total	50		60

1. Aman distributed some money among his family members. He gave half of the amount to his mother, $\frac{3}{4}$ of the remaining money to his three brothers equally and the rest money to his sister. If his sister got Rs. 9,600, then how much money did each brother get?

- a) Rs. 9,600
b) Rs. 8,600
c) Rs. 7,800
d) Rs. 9,800

Correct Answer: a

1 Mark

2. A rectangular garden is of dimension $60\text{ m} \times 40\text{ m}$. There are two roads 5 m wide each running in the middle of the garden, one parallel to the length and the other parallel to its breadth. If the cost of gravelling the road is Rs. 5 per m^2 , then find the cost of gravelling both roads:

- a) Rs. 1,055
b) Rs. 1,500
c) Rs. 2,000
d) Rs. 2,375

Correct Answer: d

1 Mark

3. Kanak and Mehak are working together on a project. Kanak can complete it in 25 days and Mehak can complete it in 20 days. They worked together for 5 days and then Kanak left. In how many days will Mehak finish the remaining work?

- a) 11 days
b) 15 days
c) 22 days
d) 28 days

Correct Answer: a

1 Mark

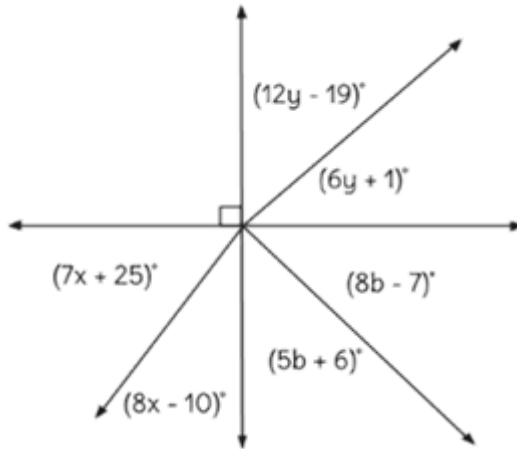
4. The average age of 20 employees in a company is 35 years. One employee aged 20 years left the company, but two new employees come in his place whose ages differ by 5 years. If the average age of all the employees remains same, then find the age of the younger employee who recently joined office:

- a) 35 years
b) 30 years
c) 25 years
d) 20 years

Correct Answer: c

1 Mark

5. Find the values of $\angle(12y-19)$ and $\angle(6y+1)$ respectively from the figure given below:



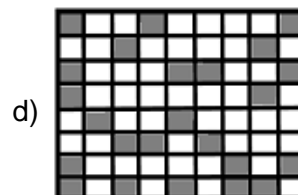
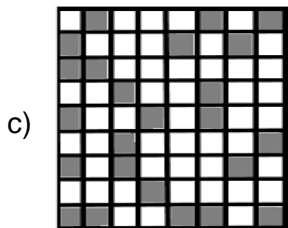
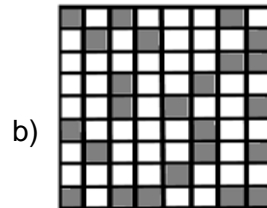
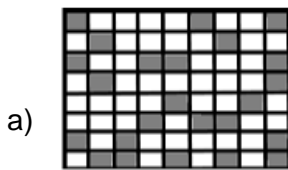
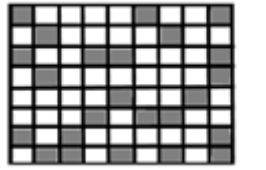
- a) $53^\circ, 37^\circ$
c) $64^\circ, 17^\circ$

- b) $37^\circ, 53^\circ$
d) $17^\circ, 64^\circ$

Correct Answer: a

1 Mark

6. Which of the given figures is a mirror image of the given figure along the dotted line of symmetry?



Correct Answer: d

1 Mark

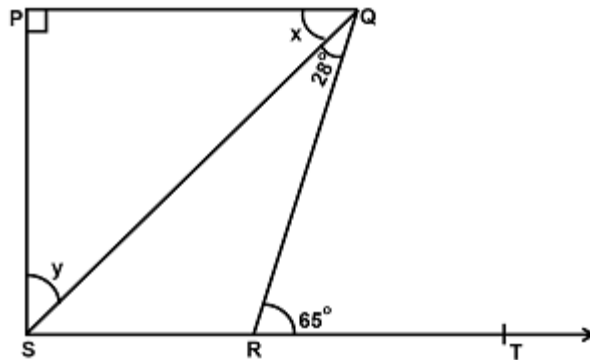
7. The base of a parallelogram is $(4x + 5)$ cm and the corresponding height is $(4x - 5)$ cm. Find the area of the parallelogram if $x = 2$:

- a) 7 cm^2
b) 39 cm^2
c) 59 cm^2
d) 89 cm^2

Correct Answer: b

1 Mark

8. In the given figure, if PQ perpendicular to PS, PQ parallel to SR, $\angle SQR = 28$ and $\angle QRT = 65$, then find the values of x and y , respectively:



- a) $37^\circ, 53^\circ$
b) $47^\circ, 63^\circ$
c) $53, 37^\circ$
d) $63^\circ, 47^\circ$

Correct Answer: a

1 Mark

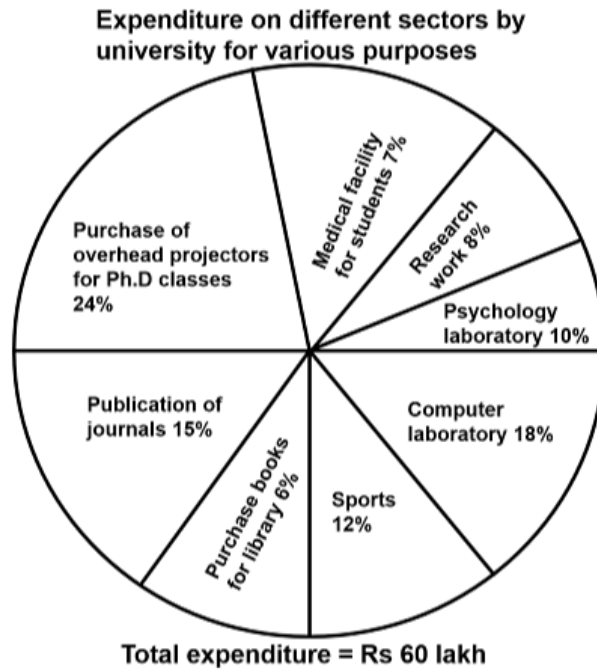
9. Anu needs some money for his school fee. She takes Rs. 1,800 from a bank at the beginning of a year. After 4 months, she borrowed Rs. 1,200 at a rate of interest double the previous one. If the sum of interest on both the loan become Rs. 272 at the end of the year, then find the interest rate per annum on Rs. 1,800?

- a) 9%
b) 6%
c) 8%
d) 12%

Correct Answer: c

2 Marks

10. Study the following pie chart carefully and answer the question given:



What is the total sum of expenditures on research work, purchase of overhead projectors for Ph.D classes and purchase of books for library together?

- a) Rs. 22.6 lakh
- b) Rs. 22.8 lakh
- c) Rs. 23.4 lakh
- d) Rs. 20.8 lakh

Correct Answer: b

2 Marks