



UNICUS OLYMPIADS

Sample Paper (2020-21)

Class 11

Unicus Mathematics Olympiad



Section – Class*	Total Questions	Marks per Questions	Total Questions
<small>*Syllabus covered</small>			
Classic Section – Class 10	28	1	28
Classic Section – Class 9	12	1	12
Scholar Section – Class 10	7	2	14
Scholar Section – Class 9	3	2	6
Grand Total	50		60

4. The frequency distribution of a discrete variable X with one missing frequency f is given below:

X	1	2	3	4
Frequency	2	3	F	5

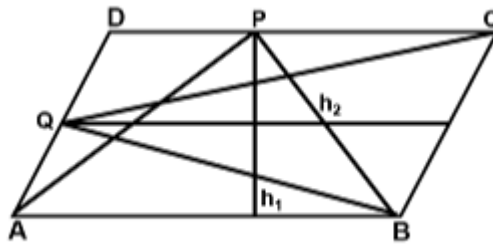
If the arithmetic mean of X is $29/8$, then find the value of missing frequency:

- a) 5
 b) 6
 c) 8
 d) 10

Correct Answer: b

1 Mark

5. Look at the image given below. There are two points P and Q on the sides DC and AD of the parallelogram $ABCD$. The area of triangle ABP is equal to:



- a) $1/2$ of area of triangle BQC
 b) Area of triangle BQC
 c) $1/3$ of area of triangle BQC
 d) Twice the area of triangle BQC

Correct Answer: b

1 Mark

6. In the family of four members, 20 years ago the average age of them was 60 years. Two children were born in this span of 20 years. But the present average age of the family remains the same. Among the two children who were born during the 20 years, if the older child at present is 8 years older than the younger one, what is the ratio of the present age of the older child to the present age of the younger child?

- a) 4: 3
 b) 7: 3
 c) 3: 2
 d) 7: 4

Correct Answer: c

1 Mark

