

Class 10th

Concept Based Questions

CASE STUDY 1

To enhance the reading skills of grade X students, the school nominates you and two of your friends to set up a class library. There are two sections- section A and section B of grade X. There are 32 students in section A and 36 students in section B.

Q.1 : What is the minimum number of books you will acquire for the class library, so that they can be distributed equally among students of Section A or Section B?

- a) 144
- b) 128
- c) 288
- d) 272

Q.2 : If the product of two positive integers is equal to the product of their HCF and LCM is true then, the HCF (32 , 36) is

- a) 2
- b) 4
- c) 6
- d) 8

Q.3 : 7 is a

- a) Prime number
- b) Composite number
- c) Neither prime nor composite
- d) None of the above

CASE STUDY 2

A seminar is being conducted by an Educational Organisation, where the participants will be educators of different subjects. The number of participants in Hindi, English and Mathematics are 60, 84 and 108 respectively.

Q.4 : In each room the same number of participants are to be seated and all of them being in the same subject, hence maximum number participants that can

accommodated in each room are

- a) 14
- b) 12
- c) 16
- d) 18

Q.5 : What is the minimum number of rooms required during the event?

- a) 11
- b) 31
- c) 41
- d) 21

Q.6 : The LCM of 60, 84 and 108 is

- a) 3780
- b) 3680
- c) 4780
- d) 4680

Q.7 : The product of HCF and LCM of 60,84 and 108 is

- a) 55360
- b) 35360
- c) 45500
- d) 45360

CASE STUDY 3

An asana is a body posture, originally and still a general term for a sitting meditation pose, and later extended in hatha yoga and modern yoga as exercise, to any type of pose or position, adding reclining, standing, inverted, twisting, and balancing poses. In the figure, one can observe that poses can be related to representation of quadratic polynomial.

Q.8 : The shape of the poses shown is

- a) Spiral
- b) Ellipse
- c) Linear
- d) Parabola

Q.9 : The graph of parabola opens downwards, if _____

- a) $a = 0$
- b) $a = 0$
- c) $a < 0$
- d) $a > 0$

Q.10 : The two zeroes in the above shown graph are

- a) 2, 4
- b) -2, 4
- c) -8, 4
- d) 2, -8

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TGT Maths