CBSE CLASS – X

MATH ANSWER KEY

(CBSE DELHI)

Code No. (30/1/2)

Series LRH/1

SECTION – D(Set-2)

The answer key is as per questions in set – 2.

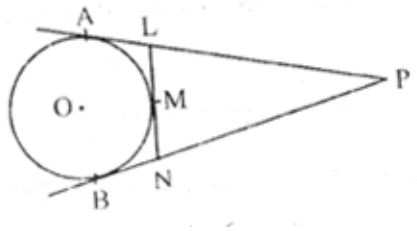
26. From the top of a 7 m high building, the angle of elevation of the top of a tower is 60 and the angle of depression of the foot of the tower is 30. Find the height of the tower.

Ans. Height of tower = 14 m

27. Prove that the lengths of tangents drawn from an external point to a circle are equal.

Using the above prove the following

In figure, PA and PB are tangents form an external point P to a circle with centre O. LN touches the circle at M. Prove that PL + LM = PN + MN



Ans. Proof

28. A milk container is made of metal sheet in the shape of frustum of a cone whose volume is $10459\frac{3}{7}$ cm. The radii of its lower and upper circular ends are 8 cm and 20 cm respectively. Find the cost of metal sheet used in making the container at the rate of Rs. 1.40 per square centimetre. $\left[\text{Use } \pi = \frac{22}{7}\right]$

OR

A toy is in the form of a hemisphere surmounted by a right circular cone of the same base radius as that of the hemisphere. If the radius of base of the cone is 21 cm and its volume is $\frac{2}{3}$ of the volume of the hemisphere, calculate the height of the cone and the surface area of the toy. $\left[\text{Use } \pi = \frac{22}{7}\right]$

Ans. Cost of metal sheet = Rs. 4505.6 (Assuming top covered)
Cost of metal sheet = Rs. 2745.6 (Assuming top open)

OR

Height of cone = 28 cm
Surface area of toy = 5082 cm^2

29. Three consecutive positive integers are such that the sum of the square of the first and the product of the other two is 46, find the integers.

OR

The difference of squares of two numbers is 88. If the larger number is 5 less than twice the smaller number, then find the two numbers.

Ans. Integers are 4, 5, 6.

OR

9 & 13

30. Find the mean, mode and median of the following frequency distribution:

Class	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
Frequency	8	8	14	22	30	8	10

Ans. Mean = 37.3

Mode = 42.7

Median = 41

SET – 3

30. Find the mean, mode and median of the following frequency distribution:

Class	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
Frequency	8	7	15	20	12	8	10

Ans. Mean = 35.625

Mode = 33.84

Median = 35