

The distribution below gives the marks obtained by 80 students on a test :

Marks	Less than 10	Less than 20	Less than 30	Less than 40	Less than 50	Less than 60
Number of Students	3	12	27	57	75	80

The modal class of this distribution is :

- (A) 10 – 20 (B) 20 – 30
(C) 30 – 40 (D) 50 – 60

The curved surface area of a cone having height 24 cm and radius 7 cm, is

- (A) 528 cm^2 (B) 1056 cm^2
(C) 550 cm^2 (D) 500 cm^2

The distance between the points $(0, 2\sqrt{5})$ and $(-2\sqrt{5}, 0)$ is

- (A) $2\sqrt{10}$ units (B) $4\sqrt{10}$ units
(C) $2\sqrt{20}$ units (D) 0

Which of the following is a quadratic polynomial having zeroes $-\frac{2}{3}$ and $\frac{2}{3}$?

- (A) $4x^2 - 9$ (B) $\frac{4}{9}(9x^2 + 4)$
(C) $x^2 + \frac{9}{4}$ (D) $5(9x^2 - 4)$

If the value of each observation of a statistical data is increased by 3, then the mean of the data

- (A) remains unchanged (B) increases by 3
(C) increases by 6 (D) increases by $3n$

(a) If $\sin \theta + \cos \theta = \sqrt{3}$, then find the value of $\sin \theta \cdot \cos \theta$.

OR

(b) If $\sin \alpha = \frac{1}{\sqrt{2}}$ and $\cot \beta = \sqrt{3}$, then find the value of $\operatorname{cosec} \alpha + \operatorname{cosec} \beta$.