

NDA Answer Key 2020 - Mathematics

Q: Find the value of θ if $\tan\theta = \frac{\cos 17^\circ - \sin 17^\circ}{\cos 17^\circ + \sin 17^\circ}$?

Ans: $\theta = 20^\circ$

Ques: Find the value of $8^{\cos 10^\circ} (\cos 20^\circ) (\cos 40^\circ)$?

Ans: $\frac{\cos 10^\circ}{\sin 10^\circ}$

Ques: Find angle of $1 - i\sqrt{3} + i\sqrt{3}$?

Ans: $\theta = 120^\circ$

Ques: Find value of $\left| \frac{\cos\theta + i\sin\theta}{\cos\theta - i\sin\theta} \right|$?

Ans: 1

Ques: If $X + 2 = 0$, $Y + 2 = 20$ and $Kx + y + 2 = 0$ Circumcentre is given $(-1, -1)$ then find the value of K ?

Ans: $K = 1$

Ques: The maximum value of $\sin x \cdot \cos x$ is

Ans: $\frac{1}{2}$ or 0.5.

Ques: What is derivative of $\tan^{-1}x$ w.r.t. to x ?

Ans: $\frac{1}{1+x^2}$

Ques: What is the minimum value of $f(x) = |x-1| + |x-2| + |x-3|$?

Ans: 2

Ques: A committee of 3 persons is to be constituted from a group of 2 men and 3 women. In how many ways can this be done?

Ans: 10 ways

Ques: The mean of 100 observations is 40. It is found that an observation 53 was misread as 83. the correct mean is

Ans: 39.70

Ques: Find value of $\lim_{x \rightarrow 0} \frac{\sin x (\log - x)^2}{x^2}$?

Ans: -1

Ques: Find minimum value of $\cos(A + \frac{\pi}{3})$?

Ans: -1

Ques: Find the number of ways that vowels of word "ABLE" will be placed at even positions?

A: 3 C 2 is the right answer.

Ques: