

1. In ΔABC , $a=2, b=3, c=5$ &

$$\frac{\cos A}{a} + \frac{\cos B}{b} + \frac{\cos C}{c} = \frac{k+7}{30}, \text{ then}$$

$$k=?$$

(a) 10 (b) 12 (c) 14 (d) 9

Q:

Q: Two cards are drawn from a pack of 52 cards. Then the probability of both the card being queen is?

$$(3) \int e^{\cos^{-1}x} \left[\frac{x - \sqrt{1-x^2}}{\sqrt{1-x^2}} \right] dx =$$

Q:

Q: If $\sec X + \tan X = 3$, then find $\sin X$.

Ans: $\frac{4}{5}$

Q: If $|3x-2|$ is $\leq$ equal to $\frac{1}{2}$ the $x \in ?$

Ans: $x \in [\frac{1}{2}, \frac{5}{6}]$

$$\int_{-5}^5 \frac{e^x + e^{-x}}{e^x - e^{-x}} dx =$$

Q:

Ans: 0

$$x = \log t, \quad y+1 = \frac{1}{t} \quad \text{then}$$

$$e^{-x} \frac{d^2 y}{dx^2} + \frac{dx}{dy} =$$

Q:

Ans: 0

$$\text{If } f(x) = \begin{cases} 6\beta - 3\alpha x & ; -4 \leq x \leq -2 \\ 4x + 1 & ; -2 \leq x \leq 0 \end{cases}$$

is continuous, then $\alpha + \beta =$

Q:

Ans: - 7/6

$$\int \frac{6 \ln 2x}{\sin^4 x + \cos^4 x} dx$$

Q:

$$\int_0^{\infty} \frac{1}{(x^2+4)(x^2+9)} dx$$

Q:

Q: A person buys 5 lottery tickets, and his probability of winning is $1/4$, then the probability that he wins at least once is?