

- Degree of the differential equation $\sin x + \cos \left(\frac{dy}{dx}\right) = y^2$ is
 - 1

(A)

(C) not defined

- The integrating factor of the differential equation 3.

$$(1 - y^2) \frac{dx}{dy} + yx = ay$$
, $(-1 < y < 1)$ is

(A) $\frac{1}{v^2-1}$

(B) $\frac{1}{\sqrt{y^2-1}}$

(C) $\frac{1}{1-v^2}$

- (D) $\frac{1}{\sqrt{1-v^2}}$
- Unit vector along PQ, where coordinates of P and Q respectively are (2, 1, -1) and (4, 4, -7), is
 - (A) $2\hat{i} + 3\hat{j} 6\hat{k}$

(B) $-2\hat{i} - 3\hat{i} + 6\hat{k}$

(C) $\frac{-2\hat{i}}{2} - \frac{3\hat{j}}{2} + \frac{6\hat{k}}{2}$

- (D) $\frac{2\hat{i}}{7} + \frac{3\hat{j}}{7} \frac{6\hat{k}}{7}$
- If in $\triangle ABC$, $\overrightarrow{BA} = 2\overrightarrow{a}$ and $\overrightarrow{BC} = 3\overrightarrow{b}$, then \overrightarrow{AC} is
 - (B) $2\vec{a} 3\vec{b}$

(A) 2a + 3b (C) 3B-2a

- (D) -2a 3b
- If $|\vec{a} \times \vec{b}| = \sqrt{3}$ and $\vec{a} \cdot \vec{b} = -3$, then angle between \vec{a} and \vec{b} is

(A) 2π/3

(C) B

(D) 5\pi

1

1

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