

Option 2 ID : 4696652157
Option 3 ID : 4696652159
Option 4 ID : 4696652160
Status : Answered
Chosen Option : 3

Section : Mathematics

Q.1 If $P(x_1, y_1)$ is a point on the hyperbola $x^2 - y^2 = a^2$, then $SP \cdot S'P = \dots\dots$

Ans

1. $\frac{x_1^2 - y_1^2}{a^2}$

2. $\frac{x_1^2 + y_1^2}{a^2}$

3. $x_1^2 - y_1^2$

4. $x_1^2 + y_1^2$


Question Type : MCQ
Question ID : 469665599
Option 1 ID : 4696652395
Option 2 ID : 4696652396
Option 3 ID : 4696652393
Option 4 ID : 4696652394
Status : Answered
Chosen Option : 4

Q.2 If $f(x) = \cos^{-1} \left[\frac{1 - (\log x)^2}{1 + (\log x)^2} \right]$, then $f'(e) = \dots\dots$

Ans

1. $\frac{1}{e}$





2. $\frac{2}{e^2}$

 3. $\frac{2}{e}$

 4. 1




Question Type : MCQ
Question ID : 469665579
Option 1 ID : 4696652316
Option 2 ID : 4696652314
Option 3 ID : 4696652315
Option 4 ID : 4696652313
Status : Answered
Chosen Option : 1

Q.3 The order of the differential equation of all circles whose radius is 4 , is

- Ans  1. 1
 2. 2
 3. 3
 4. 4

Question Type : MCQ
Question ID : 469665577
Option 1 ID : 4696652305
Option 2 ID : 4696652306
Option 3 ID : 4696652307
Option 4 ID : 4696652308
Status : Answered
Chosen Option : 3

Q.4 If $A = \begin{bmatrix} x & 1 \\ 1 & 0 \end{bmatrix}$ and $A=A^{-1}$, then $x = \dots\dots$

- Ans  1. 0
 2. 4
 3. 2
 4. 1

Question Type : MCQ
Question ID : 469665572
Option 1 ID : 4696652285
Option 2 ID : 4696652288
Option 3 ID : 4696652287
Option 4 ID : 4696652286
Status : Answered
Chosen Option : 1

Q.5 Which of the following function is not continuous at $x = 0$?

Ans

✗ 1.

$$f(x) = (1 + 2x)^{1/x}, x \neq 0$$
$$= e^2, x = 0$$

✗ 2.

$$f(x) = \sin x - \cos x, x \neq 0$$
$$= -1, x = 0$$

✓ 3.

$$f(x) = \frac{e^{1/x} - 1}{e^{1/x} + 1}, x \neq 0$$
$$= -1, x = 0$$

✗ 4.

$$f(x) = \frac{e^{5x} - e^{2x}}{\sin 3x}, x \neq 0$$
$$= 1, x = 0$$

Question Type : MCQ

Question ID : 469665580

Option 1 ID : 4696652318

Option 2 ID : 4696652319

Option 3 ID : 4696652320

Option 4 ID : 4696652317

Status : Answered

Chosen Option : 3

Q.6 It is observed that 25 % of the cases related to child labour reported to the police station are solved. If 6 new cases are reported, then the probability that atleast 5 of them will be solved is

.....

Ans

1. $\left(\frac{1}{4}\right)^6$

2. $\frac{19}{1024}$

3. $\frac{19}{2048}$

4. $\frac{19}{4096}$

Question Type : MCQ

Question ID : 469665576

Option 1 ID : 4696652302

Option 2 ID : 4696652304

Option 3 ID : 4696652301

Option 4 ID : 4696652303

Status : Answered

Chosen Option : 4

Q.7 For a G.P. , if $S_n = \frac{4^n - 3^n}{3^n}$, then $t_2 = \dots\dots$

Ans

1. $\frac{1}{9}$

2. $\frac{2}{9}$

3. $\frac{7}{9}$

4. $\frac{4}{9}$

Question Type : MCQ

Question ID : 469665561

Option 1 ID : 4696652244

Option 2 ID : 4696652243

Option 3 ID : 4696652241

Option 4 ID : 4696652242

Status : Answered

Chosen Option : 4

Q.8 The area of the region bounded by the curve $y = 2x - x^2$ and the line $y = x$ is square units.

Ans

1. $\frac{1}{6}$

2. $\frac{1}{2}$

3. $\frac{1}{3}$

4. $\frac{7}{6}$

Question Type : MCQ

Question ID : 469665578

Option 1 ID : 4696652311

Option 2 ID : 4696652309
Option 3 ID : 4696652310
Option 4 ID : 4696652312
Status : Answered
Chosen Option : 1

Q.9 The general solution of $x \frac{dy}{dx} = y - x \tan\left(\frac{y}{x}\right)$ is

Ans

✗ 1. $x^2 \sin\left(\frac{x}{y}\right) = c$

✗ 2. $x \sin\left(\frac{x}{y}\right) = c$

✓ 3. $x \sin\left(\frac{y}{x}\right) = c$

✗ 4. $x^2 \sin\left(\frac{y}{x}\right) = c$

Question Type : MCQ
Question ID : 469665552
Option 1 ID : 4696652208
Option 2 ID : 4696652207
Option 3 ID : 4696652206
Option 4 ID : 4696652205
Status : Answered
Chosen Option : 3

Q.10 The statement pattern $(p \wedge q) \wedge [\sim r \vee (p \wedge q)] \vee (\sim p \wedge q)$ is equivalent to

Ans

✗ 1. r

✓ 2. q

✗ 3. $p \wedge q$

✗ 4. p

Question Type : MCQ

Question ID : 469665585

Option 1 ID : 4696652340

Option 2 ID : 4696652339

Option 3 ID : 4696652338

Option 4 ID : 4696652337


Status : Answered


Chosen Option : 2


Q.1 A bag contain 6 white and 4 black balls. Two balls are drawn at random. The probability that


1 they are of the same colour is

Ans

 1. $\frac{5}{7}$

 2. $\frac{1}{7}$

 3. $\frac{7}{15}$

 4. $\frac{1}{15}$

Question Type : MCQ

Question ID : 469665573

Option 1 ID : 4696652292

Option 2 ID : 4696652291

Option 3 ID : 4696652290

Option 4 ID : 4696652289

Status : Answered

Chosen Option : 3

Q.1
2

$$\int \frac{\cos x + x \sin x}{x^2 + x \cos x} dx = \dots$$

Ans

✗ 1. $\log \left| \frac{x \sin x}{x + \cos x} \right| + c$

✓ 2. $\log \left| \frac{x}{x + \cos x} \right| + c$

✗ 3. $\log |\cos x + x \sin x| + c$

✗ 4. $\log |x^2 + x \cos x| + c$

Question Type : MCQ

Question ID : 469665591

Option 1 ID : 4696652364

Option 2 ID : 4696652362

Option 3 ID : 4696652363

Option 4 ID : 4696652361

Status : Answered

Chosen Option : 2

Q.1 A stone is dropped into a pond. Waves in the form of circles are generated and radius of 3 outermost ripple increases at the rate of 5 cm/sec. Then area increased after 2 seconds is

Ans ✓ 1. $100 \pi \text{ cm}^2/\text{sec}$

✗ 2. $40 \text{ cm}^2/\text{sec}$

✗ 3. $50 \text{ cm}^2/\text{sec}$

✗ 4. $25 \text{ cm}^2/\text{sec}$

Question Type : MCQ

Question ID : 469665588

Option 1 ID : 4696652350

Option 2 ID : 4696652352

Option 3 ID : 4696652349

Option 4 ID : 4696652351

Status : Answered

Chosen Option : 1

Q.1
4 If $f(x) = 3x - 2$ and $g(x) = x^2$, then $f \circ g(x) = \dots\dots\dots$

Ans ✓ 1. $3x^2 - 2$

2. $3x^2 + 2$

3. $3x - 2$

4. $2 - 3x^2$

Question Type : MCQ

Question ID : 469665574

Option 1 ID : 4696652295

Option 2 ID : 4696652294

Option 3 ID : 4696652293

Option 4 ID : 4696652296

Status : Answered

Chosen Option : 1

Q.1
5 Which of the following is NOT equivalent to $p \rightarrow q$.

Ans

1. p only if q

2. q is necessary for p

3. q only if p

4. p is sufficient for q

Question Type : MCQ

Question ID : 469665597

Option 1 ID : 4696652386

Option 2 ID : 4696652387

Option 3 ID : 4696652388

Option 4 ID : 4696652385

Status : Answered

Chosen Option : 3

Q.1
6 The value of $\int_{-3}^3 (ax^5 + bx^3 + cx + k)dx$, where a, b, c, k are constants, depends only on

Ans

1. a, b and c

✓ 2. k

✗ 3. a and b

✗ 4. a and k

Question Type : MCQ

Question ID : 469665553

Option 1 ID : 4696652212

Option 2 ID : 4696652209

Option 3 ID : 4696652211

Option 4 ID : 4696652210

Status : Answered

Chosen Option : 2

Q.1 The general solution of the differential equation of all circles having centre at A (-1 , 2) is

7

Ans ✗ 1.

$$x^2 + y^2 + x - 2y + c = 0$$

✗ 2.

$$x^2 + y^2 - 2x + 4y + c = 0$$

✗ 3. $x^2 + y^2 - x + 2y + c = 0$

✓ 4.

$$x^2 + y^2 + 2x - 4y + c = 0$$

Question Type : MCQ

Question ID : 469665565

Option 1 ID : 4696652259

Option 2 ID : 4696652258

Option 3 ID : 4696652257

Option 4 ID : 4696652260

Status : Answered

Chosen Option : 4

Q.1 If A is non-singular matrix such that $(A-2I)(A-4I) = 0$ then $A+8A^{-1} = \dots$

8

Ans ✗ 1. I

✗ 2. 0

✗ 3. 3I

✓ 4. 6I

Question Type : MCQ

Question ID : 469665584

Option 1 ID : 4696652334

Option 2 ID : 4696652333

Option 3 ID : 4696652335

Option 4 ID : 4696652336

Status : Answered

Chosen Option : 4

Q.1 If G (3 , -5 , r) is centroid of triangle ABC where A (7,-8,1) , B (p , q , 5) and C (q+1 , 5p , 0)
9 are vertices of a triangle then values of p , q , r are respectively

Ans ✗ 1. 6 , 5 , 4

✗ 2. -4 , 5 , 4

✗ 3. -3 , 4 , 3

✓ 4. -2 , 3 , 2

Question Type : MCQ

Question ID : 469665582

Option 1 ID : 4696652328

Option 2 ID : 4696652325

Option 3 ID : 4696652327

Option 4 ID : 4696652326

Status : Answered

Chosen Option : 4

Q.2
0 $\int \frac{1}{(x^2+1)^2} dx = \dots\dots\dots$

Ans

✗ 1. $\tan^{-1}x - \frac{1}{2x(x^2 + 1)} + c$

✓ 2. $\frac{1}{2} \tan^{-1}x + \frac{x}{2(x^2 + 1)} + c$

✗ 3. $\tan^{-1}x + \frac{1}{x^2 + 1} + c$

$$\times 4. \tan^{-1}x + \frac{1}{2(x^2 + 1)} + c$$

Question Type : MCQ

Question ID : 469665566

Option 1 ID : 4696652264

Option 2 ID : 4696652262

Option 3 ID : 4696652261

Option 4 ID : 4696652263

Status : Answered

Chosen Option : 2

Q.2
1

$$\text{If } \theta = \frac{17\pi}{3} \text{ then } \tan\theta - \cot\theta = \dots\dots\dots$$

Ans

$$\times 1. \frac{1}{2\sqrt{3}}$$

$$\times 2. \frac{-1}{2\sqrt{3}}$$

$$\times 3. \frac{2}{\sqrt{3}}$$

$$\checkmark 4. -\frac{2}{\sqrt{3}}$$

Question Type : MCQ

Question ID : 469665600

Option 1 ID : 4696652397

Option 2 ID : 4696652398

Option 3 ID : 4696652399

Option 4 ID : 4696652400

Status : Answered

Q.2
2 Derivative of $\log_{e^2}(\log x)$ with respect to x is

Ans

1. $\frac{2}{x \log x}$

2. $\frac{1}{x \log x}$

3. $\frac{1}{x \log x^2}$

4. $\frac{2}{\log x}$

Question Type : MCQ

Question ID : 469665592

Option 1 ID : 4696652368

Option 2 ID : 4696652365

Option 3 ID : 4696652366

Option 4 ID : 4696652367

Status : Answered

Chosen Option : 3

Q.2
3 In ΔABC ; with usual notations, if $\cos A = \frac{\sin B}{\sin C}$, then the triangle is

Ans 1. Acute angled triangle

2. Equilateral triangle

3. Obtuse angled triangle

4. Right angled triangle

Question Type : MCQ

Question ID : 469665559

Option 1 ID : 4696652233

Option 2 ID : 4696652236

Option 3 ID : 4696652235

Option 4 ID : 4696652234

Q.2
4 For a G.P, if $(m + n)^{th}$ term is p and $(m - n)^{th}$ term is q , then m^{th} term is

Ans

1. pq

2. \sqrt{pq}

3. $\frac{p}{q}$

4. $\frac{q}{p}$

Question Type : MCQ

Question ID : 469665598

Option 1 ID : 4696652389

Option 2 ID : 4696652392

Option 3 ID : 4696652391

Option 4 ID : 4696652390

Status : Answered

Chosen Option : 2

Q.2
5 A random variable X has following probability distribution

$X=x$	1	2	3	4	5	6
$P(X=x)$	K	3K	5K	7K	8K	K

Then $P(2 \leq X < 5) = \dots\dots$

Ans

1. $\frac{3}{5}$

2. $\frac{7}{25}$

3. $\frac{23}{25}$

4. $\frac{24}{25}$

Question Type : MCQ

Question ID : 469665564

Option 1 ID : 4696652253

Option 2 ID : 4696652254

Option 3 ID : 4696652255

Option 4 ID : 4696652256

Status : Answered

Chosen Option : 1

Q.2
6 The equation of normal to the curve $y = \log_e x$ at the point P (1,0) is

Ans

1. $2x + y = 2$

2. $x - 2y = 1$

3. $x - y = 1$

4. $x + y = 1$

Question Type : MCQ

Question ID : 469665551

Option 1 ID : 4696652203

Option 2 ID : 4696652204

Option 3 ID : 4696652202

Option 4 ID : 4696652201

Status : Answered

Chosen Option : 4

Q.2
7 The values of x in $(0, \frac{\pi}{2})$ satisfying the equation $\sin x \cos x = \frac{1}{4}$ are

Ans

1. $\frac{\pi}{6}, \frac{\pi}{12}$

✓ 2. $\frac{\pi}{12}, \frac{5\pi}{12}$

✗ 3. $\frac{\pi}{8}, \frac{3\pi}{8}$

✗ 4. $\frac{\pi}{8}, \frac{\pi}{4}$

Question Type : MCQ

Question ID : 469665583

Option 1 ID : 4696652329

Option 2 ID : 4696652331

Option 3 ID : 4696652330

Option 4 ID : 4696652332

Status : Answered

Chosen Option : 2

Q.2
8 If $\vec{a} + \vec{b}, \vec{b} + \vec{c}$ and $\vec{c} + \vec{a}$ are coterminous edges of a parallelepiped then its volume is.....

Ans

✗ 1. $3[\vec{a} \vec{c} \vec{b}]$

✗ 2. 0

✓ 3. $2[\vec{a} \vec{b} \vec{c}]$

✗ 4. $4[\vec{b} \vec{a} \vec{c}]$

Question Type : MCQ

Question ID : 469665570

Option 1 ID : 4696652278

Option 2 ID : 4696652280

Option 3 ID : 4696652277

Option 4 ID : 4696652279

Status : Answered

Chosen Option : 3

If the c.d.f (cumulative distribution function) is given by $F(x) = \frac{x-25}{10}$,

then $P(27 \leq x \leq 33) = \dots\dots$

Ans

✓ 1. $\frac{3}{5}$

✗ 2. $\frac{3}{10}$

✗ 3. $\frac{1}{5}$

✗ 4. $\frac{1}{10}$

Question Type : MCQ

Question ID : 469665589

Option 1 ID : 4696652354

Option 2 ID : 4696652355

Option 3 ID : 4696652356

Option 4 ID : 4696652353

Status : Answered

Chosen Option : 1

Q.3
0 The joint equation of pair of straight lines passing through origin and having slopes $(1 + \sqrt{2})$ and $(\frac{1}{1+\sqrt{2}})$ is

Ans

✓ 1. $x^2 - 2\sqrt{2}xy + y^2 = 0$

✗ 2. $x^2 - 2\sqrt{2}xy - y^2 = 0$

✗ 3. $x^2 + 2xy - y^2 = 0$

$x^2 + 2xy + y^2 = 0$

Question Type : MCQ

Question ID : 469665558

Option 1 ID : 4696652229

Option 2 ID : 4696652230

Option 3 ID : 4696652231

Option 4 ID : 4696652232

Status : Answered

Chosen Option : 1

Q.3
1 The angle between lines $\frac{x-2}{2} = \frac{y-3}{-2} = \frac{z-5}{1}$ and $\frac{x-2}{1} = \frac{y-3}{2} = \frac{z-5}{2}$ is

Ans

1. 30°

2. 60°

3. 45°

4. 90°

Question Type : MCQ

Question ID : 469665569

Option 1 ID : 4696652273

Option 2 ID : 4696652275

Option 3 ID : 4696652274

Option 4 ID : 4696652276

Status : Answered

Chosen Option : 4

Q.3
2 If the line passes through the points P(6,-1,2), Q(8,-7,2λ) and R(5,2,4) then value of λ is

Ans

1. -3

2. 0

3. -1

4. 2

Question Type : MCQ

Question ID : 469665594

Option 1 ID : 4696652376

Option 2 ID : 4696652374

Option 3 ID : 4696652375

Option 4 ID : 4696652373

Status : Answered

Q.3
3 The equivalent form of the statement $\sim(p \rightarrow \sim q)$ is

Ans

✓ 1. $p \wedge q$

✗ 2. $p \wedge \sim q$

✗ 3. $p \vee \sim q$

✗ 4. $\sim p \vee q$

Question Type : MCQ

Question ID : 469665560

Option 1 ID : 4696652239

Option 2 ID : 4696652240

Option 3 ID : 4696652238

Option 4 ID : 4696652237

Status : Answered

Chosen Option : 1

Q.3
4 If $A = \{x \in \mathbb{R} : x^2 - 5|x| + 6 = 0\}$, then $n(A) = \dots\dots\dots$

Ans

✗ 1. 2

✗ 2. 0

✗ 3. 1

✓ 4. 4

Question Type : MCQ

Question ID : 469665586

Option 1 ID : 4696652343

Option 2 ID : 4696652341

Option 3 ID : 4696652342

Option 4 ID : 4696652344

Status : Answered

Chosen Option : 4

Q.3
5 If the function $f(x) = \frac{\log(1+ax) - \log(1-bx)}{x}$, $x \neq 0$ is continuous at $x = 0$ then,

$f(0) = \dots$

Ans

✗ 1. $\log a - \log b$

✓ 2. $a + b$

\times 3. $\log a + \log b$

\times 4. $a - b$

Question Type : MCQ

Question ID : 469665555

Option 1 ID : 4696652218

Option 2 ID : 4696652219

Option 3 ID : 4696652217

Option 4 ID : 4696652220

Status : Answered

Chosen Option : 2

Q.3
6 The coordinates of the foot of perpendicular drawn from origin to the plane $2x - y + 5z - 3 = 0$ are

Ans

\times 1. $\left(\frac{2}{\sqrt{30}}, \frac{-1}{\sqrt{30}}, \frac{5}{\sqrt{30}}\right)$

\times 2. $(2, -1, 5)$

\times 3. $\left(\frac{2}{3}, \frac{-1}{3}, \frac{5}{3}\right)$

\checkmark 4. $\left(\frac{1}{5}, \frac{-1}{10}, \frac{1}{2}\right)$

Question Type : MCQ

Question ID : 469665556

Option 1 ID : 4696652223

Option 2 ID : 4696652222

Option 3 ID : 4696652224

Option 4 ID : 4696652221

Status : Answered

Chosen Option : 4

Q.3
7 $\int \frac{\sqrt{x^2 - a^2}}{x} dx = \dots\dots$

Ans \checkmark 1.

$$\sqrt{x^2 - a^2} - a \cos^{-1} \left(\frac{a}{x} \right) + c$$

✗ 2.

$$x\sqrt{x^2 - a^2} - \frac{1}{a} \tan^{-1} \left(\frac{x}{a} \right) + c$$

✗ 3. $\sqrt{x^2 - a^2} + a \sec^{-1} \left(\frac{x}{a} \right) + c$

✗ 4.

$$\sqrt{x^2 - a^2} + \frac{1}{x} \sec^{-1}(x) + c$$

Question Type : MCQ

Question ID : 469665554

Option 1 ID : 4696652213

Option 2 ID : 4696652216

Option 3 ID : 4696652214

Option 4 ID : 4696652215

Status : Answered

Chosen Option : 1

Q.3
8

The maximum value of $z = 9x + 11y$ subject to $3x + 2y \leq 12, 2x + 3y \leq 12,$

$x \geq 0, y \geq 0$ is _____ .

Ans ✗ 1. 44

✗ 2. 54

✗ 3. 36

✓ 4. 48

Question Type : MCQ

Question ID : 469665593

Option 1 ID : 4696652370

Option 2 ID : 4696652372

Option 3 ID : 4696652369

Option 4 ID : 4696652371

Status : Answered

Chosen Option : 4

Q.3
9

$$\int_0^4 \frac{1}{1 + \sqrt{x}} dx = \dots$$

Ans

1. $\log\left(\frac{e^4}{6}\right)$

2. $\log\left(\frac{e^4}{3}\right)$

3. $\log\left(\frac{e^4}{9}\right)$

4. $\log\left(\frac{e^3}{4}\right)$

Question Type : MCQ

Question ID : 469665590

Option 1 ID : 4696652359

Option 2 ID : 4696652358

Option 3 ID : 4696652360

Option 4 ID : 4696652357

Status : Answered

Chosen Option : 3

Q.4 The number of solutions of $\sin^2\theta = \frac{1}{2}$ in $[0, \pi]$ is

Ans 1. three

2. four

3. two

4. one

Question Type : MCQ

Question ID : 469665596

Option 1 ID : 4696652383

Option 2 ID : 4696652384

Option 3 ID : 4696652382
Option 4 ID : 4696652381
Status : Answered
Chosen Option : 3

Q.4
1 If \vec{p}, \vec{q} and \vec{r} are nonzero, noncoplanar vectors then $[\vec{p} + \vec{q} - \vec{r} \quad \vec{p} - \vec{q} \quad \vec{q} - \vec{r}] = \dots$

Ans

1. $3[\vec{p} \quad \vec{q} \quad \vec{r}]$

2. 0

3. $[\vec{p} \quad \vec{q} \quad \vec{r}]$

4. $2[\vec{p} \quad \vec{q} \quad \vec{r}]$

Question Type : MCQ
Question ID : 469665557
Option 1 ID : 4696652227
Option 2 ID : 4696652228
Option 3 ID : 4696652225
Option 4 ID : 4696652226
Status : Answered
Chosen Option : 3

Q.4 Which of the following equation has no solution ?

2

Ans

1. $\sec\theta = 23$

2. $\cos\theta = \sqrt{2}$

3. $\tan\theta = 2019$

4. $\sin\theta = -\frac{1}{5}$

Question Type : MCQ
Question ID : 469665575
Option 1 ID : 4696652299
Option 2 ID : 4696652298
Option 3 ID : 4696652300
Option 4 ID : 4696652297

Status : Answered
Chosen Option : 2

Q.4
3 The minimum value of $z = 10x + 25y$ subject to $0 \leq x \leq 3, 0 \leq y \leq 3, x + y \geq 5$ is ...

- Ans
- 1. 80
 - 2. 95
 - 3. 105
 - 4. 30

Question Type : MCQ
Question ID : 469665568
Option 1 ID : 4696652270
Option 2 ID : 4696652272
Option 3 ID : 4696652271
Option 4 ID : 4696652269
Status : Answered
Chosen Option : 1

Q.4
4 If $f(x) = 3x^3 - 9x^2 - 27x + 15$, then the maximum value of $f(x)$ is

- Ans
- 1. -66
 - 2. 30
 - 3. -30
 - 4. 66

Question Type : MCQ
Question ID : 469665563
Option 1 ID : 4696652249
Option 2 ID : 4696652250
Option 3 ID : 4696652252
Option 4 ID : 4696652251
Status : Answered
Chosen Option : 2

Q.4 The equation of the plane passing through the point $(-1, 2, 1)$ and perpendicular to the line joining the points $(-3, 1, 2)$ and $(2, 3, 4)$ is

Ans

- 1. $\vec{r} \cdot (5\hat{i} + 2\hat{j} + 2\hat{k}) = 1$
- 2. $\vec{r} \cdot (5\hat{i} + 2\hat{j} + 2\hat{k}) = -1$
- 3. $\vec{r} \cdot (5\hat{i} - 2\hat{j} + 2\hat{k}) = -5$
- 4. $\vec{r} \cdot (5\hat{i} - 2\hat{j} - 2\hat{k}) = 1$

Question Type : MCQ

Question ID : 469665581

Option 1 ID : 4696652322

Option 2 ID : 4696652321

Option 3 ID : 4696652323

Option 4 ID : 4696652324

Status : Answered

Chosen Option : 1

Q.4
6 If the lengths of the transverse axis and the latus rectum of a hyperbola are 6 and $\frac{8}{3}$ respectively, then the equation of the hyperbola is

Ans

1. $4x^2 - 9y^2 = 72$

2. $4x^2 - 9y^2 = 36$

3. $9x^2 - 4y^2 = 72$

4. $9x^2 - 4y^2 = 36$

Question Type : MCQ

Question ID : 469665562

Option 1 ID : 4696652247

Option 2 ID : 4696652245

Option 3 ID : 4696652248

Option 4 ID : 4696652246

Status : Answered

Chosen Option : 2

Q.4
7 The value of $\tan^{-1}\frac{1}{3} + \tan^{-1}\frac{1}{5} + \tan^{-1}\frac{1}{7} + \tan^{-1}\frac{1}{8}$ is

Ans

1. $\frac{11\pi}{5}$

2. $\frac{\pi}{4}$

3. π

4. $\frac{3\pi}{4}$

Question Type : MCQ

Question ID : 469665571

Option 1 ID : 4696652282

Option 2 ID : 4696652284

Option 3 ID : 4696652283

Option 4 ID : 4696652281

Status : Answered

Chosen Option : 2

Q.4 The joint equation of the lines passing through the origin and trisecting the first quadrant is
8

Ans

1. $\sqrt{3}x^2 - 4xy + \sqrt{3}y^2 = 0$

2. $x^2 + \sqrt{3}xy - y^2 = 0$

3. $3x^2 - y^2 = 0$

4. $x^2 - \sqrt{3}xy - y^2 = 0$

Question Type : MCQ

Question ID : 469665595

Option 1 ID : 4696652379

Option 2 ID : 4696652377

Option 3 ID : 4696652380

Option 4 ID : 4696652378

Status : Answered

Chosen Option : 1

Q.4
9 If P(2,2) , Q(-2,4) and R(3,4) are the vertices of ΔPQR then the equation of the median through vertex R is

Ans

1. $x + 3y + 9 = 0$

2. $x - 3y + 9 = 0$

3. $x - 3y - 9 = 0$

4. $x + 3y - 9 = 0$

Question Type : MCQ

Question ID : 469665587

Option 1 ID : 4696652345

Option 2 ID : 4696652347

Option 3 ID : 4696652346

Option 4 ID : 4696652348

Status : Answered

Chosen Option : 2

Q.5
0

If $x = \sqrt{a^{\sin^{-1} t}}$, $y = \sqrt{a^{\cos^{-1} t}}$, then $\frac{dy}{dx} = \dots\dots$

Ans

1. $\frac{-y}{x}$

2. $\frac{x}{y}$

3. $\frac{y}{x}$

4. $\frac{-x}{y}$

Question Type : MCQ

Question ID : 469665567

Option 1 ID : 4696652267

Option 2 ID : 4696652266

Option 3 ID : 4696652265

Option 4 ID : 4696652268

Status : Answered

Chosen Option : 1