**BITSAT Maths 2010 Sample Paper Test**

The equation of the normal to the circle x2 + y2 = a2 at point (x’ y’) will be :

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| --- |
|  |
|  | x’ y – xy’ = 0 |
|  | xx – yy’ = 0 |
|  | xy’ + xy’ = 0 |
|  | xx’ + yy’ = 0 |

Equation of the bisector of the acute angle between lines 3x + 4y + 5 = 0 and 12x – 5y – 7 = 0 is :

|  |
| --- |
|  |
|  | 21x + 77y + 100 = 0 |
|  | 99x – 27y + 30 = 0 |
|  | 99x + 27y + 30 = 0 |
|  | 21x – 77y – 100 = 0 |

Equation to the line passing through the point (-4,5) and perpendicular to 3x = 4y = 7 :

|  |
| --- |
|  |
|  | 3x-4y+32=0 |
|  | 4x+3y+1= 0 |
|  | 3x+4y-8=0 |
|  | 4x-3y+31=0 |

If is the angle between two straight lines represented by = 0 then :

|  |
| --- |
|  |
|  |  tan \ \theta =  \cfrac{2 \sqrt{h^2 + ab}}{a \ + \ b}  |
|  |  cos \ \theta =  \cfrac{2 \sqrt{h^2 \ - \ ab}}{a \ + \ b}  |
|  |  tan \ \theta =  \cfrac{\sqrt{h^2 \ - \ ab}}{a \ + \ b}  |
|  |  tan \ \theta =  \cfrac{2 \sqrt{h^2 \ + \ ab}}{a \ + \ b}  |

The real part of cos h :

|  |
| --- |
|  |
|  |  sin \ \alpha \ sin \ h \beta  |
|  |  cos \ \alpha \ cos \ h \beta  |
|  |  2 \ cos \ n \theta  |
|  |  cos \ h \alpha \ cos \ \beta  |

If z = cos i sin then the value of will be :

|  |
| --- |
|  |
|  |  sin \ 2n\theta  |
|  |  2 \ sin \ n\theta  |
|  |  2 \ cos \ n\theta  |
|  |  cos \ 2n\theta  |

If are the roots of the equation – 2x + 4 = 0 then the value of will be :

|  |
| --- |
|  |
|  |  i2^{n+1} \ sin \ (n\pi/3)  |
|  |  i2^{n+1} \ cos \ (n\pi/3)  |
|  |  i2^{n-1} \ sin \ (n\pi/3)  |
|  |  2^{n-1} \ cos \ (n\pi/3)  |

![ sin \ \theta ]^n ]()is equal to :

|  |
| --- |
|  |
|  |  cos^n \ \alpha \ e^{in\theta}  |
|  |  sin^n \ \alpha \ e^{in\theta}  |
|  |  cos^n \ \alpha \ e-^{in\theta}  |
|  |  sin^n \ \alpha \ e^{-in\theta}  |

If A is a skew symmetric matrix of second order and C is a column matrix of second order then CAC is equal to :

|  |
| --- |
|  |
|  | [0] |
|  | [1] |
|  |  \left [\overset{0 \ 1}{1 \ 0} \right ]  |
|  |  \left [\overset{1 \ 0}{0 \ 1} \right ]  |

If A = ![ \left [\overset{3 \ 1}{-1 \ 2} \right ] ]()and I ![ \left [\overset{1 \ 0}{0 \ 1} \right ] ]()then the correct statement is :

|  |
| --- |
|  |
|  |  A^2 +5A - 7I = 0  |
|  |  -A^2 +5A - 7I = 0  |
|  |  A^2 -5A + 7I = 0  |
|  |  A^2 +5A + 7I = 0  |

If A and B are the two matrices of the same order and = (A+B ) (A-B) , then the correct statement will be :

|  |
| --- |
|  |
|  | A’B’ = AB |
|  | AB=BA |
|  | A^2+B^2 \ = \ A^2-B^2  |
|  | none of these |

The value of the determinant will be :

|  |
| --- |
|  |
|  |  (a-b-c) \ (a^2+b^2+c^2)  |
|  |  (a+b+c)^3  |
|  |  (a+b+c)(ab+bc+ca)  |
|  | none of these |

If + …+ then is equal to :

|  |
| --- |
|  |
|  |  3^n  |
|  |  2^n  |
|  |  1  |
|  |  0  |

The term independent of x in the expansion ![ \Bigg [of x + \cfrac{1}{x} \Bigg ]^{2n} ]()is :

|  |
| --- |
|  |
|  |  \cfrac{1.3.5........(2n-1)}{n!} \ . 2^{n-1}  |
|  |  \cfrac{1.3.5........(2n-1)}{n!} \ . 2^n  |
|  |  a.3.5......(2n-1)} \ . 2^n  |
|  | none of these |

is equal to :

|  |
| --- |
|  |
|  |  x^3+3x^2+3x-1  |
|  |  x^3-3x^2+3x-1  |
|  |  x^3-3x^2-3x+1  |
|  |  x^3+3x^2+3x+1  |

If n N then m2 is equal to :

|  |
| --- |
|  |
|  |  \cfrac{m(m+1)(2m+1)}{6}  |
|  |  \cfrac{n(n-1)(2n-1)}{6}  |
|  |  \cfrac{m((m-1)(2m-1)}{6}  |
|  |  \cfrac{n(n+1)(2n+1)}{6}  |

If A.M. and H.M. between two numbers are 27 and 12 respectively then their G.M. is:

|  |
| --- |
|  |
|  | 9 |
|  | 18 |
|  | 24 |
|  | 36 |

f are in A.P. then :

|  |
| --- |
|  |
|  | p2,q2, r2 are in A.P. |
|  | p,q,r are in A.P. |
|  | p,q,r are in G.P. |
|  |  \cfrac{1}{p} \ , \cfrac{1}{q} \ ,  \cfrac{1}{r} , \ are \ in \ A.P. |

If are the roots of the equation – ax + b = 0 and then :

|  |
| --- |
|  |
|  |  v_n+1 = av_n + bv^{n-1}  |
|  |  v_{n+1} = bv_n - av_{n-1}  |
|  |  v^{n+1} = av_n - bv_{n-1}  |
|  |  v^{n+1} = bv_n + av_{n-1}  |

If are the roots of the equation then k will be:

|  |
| --- |
|  |
|  | 5 |
|  | -5 |
|  | 13 |
|  | 1 |

The value will be :

|  |
| --- |
|  |
|  | 0 |
|  | i |
|  | – 2 – 2i |
|  | 2 – 2i |

A coin tossed m + n (m > n) , times then the probability that the head appears m times continuosly is :

|  |
| --- |
|  |
|  |  \cfrac{m+n}{2^{m+n}}  |
|  |  \cfrac{n+2}{2^{m+1}}  |
|  |  \cfrac{m}{2^{m+n}}  |
|  |  \cfrac{m+2}{2^{n+1}}  |

For any two events A and B if P = 5/6, P = 1/3, P(B) = ½ then P(A) is :

|  |
| --- |
|  |
|  | ½ |
|  | 2/3 |
|  | 1/3 |
|  | none of these |

If M and N are any two events , then the probability of happening exactly one event is:

|  |
| --- |
|  |
|  | P(M) + P(N) – P(MN) |
|  | P(M) + P(N) – 2P(MN) |
|  | P(M) + P(N) + 2P(MN) |
|  | none of these |

A bag contains 3 white and 5 black balls. One ball is drawn at random. Then the probability that it is black is :

|  |
| --- |
|  |
|  |  \cfrac{1}{8}  |
|  |  \cfrac{3}{8}  |
|  |  \cfrac{5}{8}  |
|  |  \cfrac{3}{5}  |

A box contains 100 bulbs, out of these 10 are used. 5 bulbs are choosen at random. Then the probability that no one is fused is :

|  |
| --- |
|  |
|  |  \left [\cfrac{9}{10} \right ]^5  |
|  |  \cfrac{^{90}C_5}{^{100}C_5}  |
|  |  \left [\cfrac{1}{2} \right ]^5  |
|  |  10^{-5}  |

For any two events A and B the correct statement is :

|  |
| --- |
|  |
|  |  P \ (A \cap B) \le P (A) + P \ (B)  |
|  |  P \ (A \cap B) \le P (A) + P \ (B) \ - 1  |
|  |  P \ (A \cap B) \ge P (A) + P \ (B) \ - 1  |
|  |  P \ (A \cap B) \ge P (A) + P \ (B)  |

For any non zero vector correct statement is :

|  |
| --- |
|  |
|  |  \overset{\rightarrow \rightarrow}a.a \le 0  |
|  |  \overset{\rightarrow \rightarrow}a.a = 0  |
|  |  \overset{\rightarrow \rightarrow}a.a > 0  |
|  |  \overset{\rightarrow \rightarrow}a.a \ge 0  |

then the correct statement is :

|  |
| --- |
|  |
|  | out of  \overrightarrow{a,} \overrightarrow{b,}  \overrightarrow{c,} any two vectors are parallel |
|  |  \overrightarrow{a,} \overrightarrow{b,}  \overrightarrow{c,} are coplanar |
|  | any two are equal  \overrightarrow{a,} \overrightarrow{b,}  \overrightarrow{c,}  |
|  | at least one above statement is correct |

If 0 where are non zero vectors then :

|  |
| --- |
|  |
|  |  \overset{\rightarrow}A\ and \  \overset{\rightarrow}B are perpendicular to each other |
|  | the angle between  \overset{\rightarrow}A\  and\ \overset{\rightarrow}B\ is\ \pi  |
|  |  \overset{\rightarrow}A\  and \ \overset{\rightarrow}B parallel vectors |
|  |  \overset{\rightarrow}B is unit vector |

If 2i + j – k and i – 4j + k are perpendicular to each other then is equal to:

|  |
| --- |
|  |
|  | – 3 |
|  | – 2 |
|  | – 1 |
|  | 0 |

If (x) = f(x) then f(x) dx is equal to :

|  |
| --- |
|  |
|  |  f(1) - f(2)  |
|  |  \Phi (1) \ - \ \Phi(2)  |
|  |  f(2) -f(1)  |
|  |  \Phi (2) \ - \ \Phi(1)  |

If f (a – x) = f(x), then xf(x) dx is equal to :

|  |
| --- |
|  |
|  |  \overset{a}{0} \ f(X)dX  |
|  |  a \overset{a/2}{0} \ f(X)dX  |
|  |  a \overset{a}{0} \ f(X)dX  |
|  | none of these |

f(x)dx = 2 f(x)dx when :

|  |
| --- |
|  |
|  | f(2a-x) = – fx |
|  | f(2a-x)=f(x) |
|  | f(-x)=-f(x) |
|  | f(-x)=f(x) |

| 1 – x|dx is equal to :

|  |
| --- |
|  |
|  |  0  |
|  |  1  |
|  |  \cfrac{3}{2}  |
|  |  \cfrac{1}{2}  |

For any integer n the value of (2n+1)x dx will be:

|  |
| --- |
|  |
|  |  e^2  |
|  | 0 |
|  | 1 |
|  | e |

dx is equal to :

|  |
| --- |
|  |
|  |  2 \ tan^{-1} (tan^2 X ) + C  |
|  |  tan^{-1} (X \ tan^2 X ) + C  |
|  |  tan^{-1} (tan^2 X ) + C  |
|  |  none \ of \  these  |

dx is equal to :

|  |
| --- |
|  |
|  |  - \ \cfrac{1}{5X^4} + C  |
|  |  - \ \cfrac{1}{5X^6} + C  |
|  |  - \ \cfrac{1 \ + \ C}{4X^4} + C  |
|  |  \cfrac{-5}{X^6} + C  |

The function sin x + cos x is maximum when x is equal to :

|  |
| --- |
|  |
|  |  \cfrac{\pi}{6}  |
|  |  \cfrac{\pi}{4}  |
|  |  \cfrac{\pi}{3}  |
|  |  \cfrac{\pi}{2}  |

If the normal to a curve is parallel to axis of x, then the correct statement is :

|  |
| --- |
|  |
|  | \cfrac{dX}{dy} = - 1  |
|  | \cfrac{dX}{dy}  |
|  | \cfrac{dX}{dy} = 0  |
|  | \cfrac{dy}{dX} = 0  |

x is equal to :

|  |
| --- |
|  |
|  |  - \cfrac{1}{\sqrt{X^2 \ - 1}}  |
|  |  \cfrac{1}{\sqrt{X^2 \ - 1}}  |
|  |  \cfrac{1}{\sqrt{1 - X^2}}  |
|  |  - \ \cfrac{1}{\sqrt{1 - X^2}}  |

The differential coefficient of is :

|  |
| --- |
|  |
|  |  2X^{3} e^{x3}  |
|  |  3X (e^{x3})  |
|  | e^{x3}  |
|  |  3X^{2} e^{x3}  |

is equal to :

|  |
| --- |
|  |
|  |  X^X \ log \ (e/X)  |
|  |  X^X \ log \ eX  |
|  |  log \ eX  |
|  |  X^X \ log \ X  |

[f(x),g(x)] will exist, when :

|  |
| --- |
|  |
|  |  \overset{lim}{X \rightarrow a}  \cfrac{f(X)}{g(X)} is exists |
|  |  \overset{lim}{X \rightarrow a}  [f(X)]^{g(X)} is exists |
|  |  \overset{lim}{X \rightarrow a} f (x) or lim g(x) is exists |
|  |  \overset{lim}{X \rightarrow a} f (x) and  \overset{lim}{X \rightarrow a} g(x) both exists |

is equal to :

|  |
| --- |
|  |
|  | 2 |
|  | - 1 |
|  | 1 |
|  | 0 |

If f(x) = sin [x] , [x] 0 where [x] is a greatest integer less or equal to x then f(x) is equal to :

|  |
| --- |
|  |
|  | - 1 |
|  | 0 |
|  | 1 |
|  | does not exist |

If A = {-2, -1, 0, 1,2} and f: such that f(X) = + 1, then the range of f will be:

|  |
| --- |
|  |
|  |  \Big\{  1, \overset{+}{-} \ 2, \overset{+}{-} 5  \Big\}  |
|  | {1,2,5} |
|  | {-2, -1, 0, 1,2} |
|  | none of these |

The point (at3, at2) will lies on the curve :

|  |
| --- |
|  |
|  |  X^3 \ = \ ay^2  |
|  |  X^3 \ = \ ay  |
|  |  y^2 \ = \ ac  |
|  |  y^2 \ = \ aX^2  |

The diameter of the circle + 4x – 6y = 0, is :

|  |
| --- |
|  |
|  |  \sqrt{52}  |
|  |  \sqrt{13}  |
|  |  \sqrt{26}  |
|  |  \sqrt{20}  |

The pole of the line + my + n = 0 w.r.t. the circle is :

|  |
| --- |
|  |
|  |  \Big[- \cfrac{n}{1} \ a^2 \ ,  - \cfrac{n}{m} \ a^2 \Big]  |
|  |  \Big[- \cfrac{a}{na^2} ,  \cfrac{m}{ma^2} \Big]  |
|  |  \Big[- \cfrac{1}{n} \ a^2 \ ,  \cfrac{m}{n} \ a^2 \Big]  |
|  |  \Big[- \cfrac{1}{n} \ a^2 \ ,  - \cfrac{m}{n} \ a^2 \Big]  |

Two dice thrown together then the probability of getting a sum of 7, is :

|  |
| --- |
|  |
|  |  \cfrac{7}{36}  |
|  |  \cfrac{6}{36}  |
|  |  \cfrac{5}{36}  |
|  |  \cfrac{8}{36}  |

For any two events A and B, P is equal :

|  |
| --- |
|  |
|  |  P(A) - P(A \cap B)  |
|  |  P (A) - \overset{\cap}{P(A \cap B)}  |
|  |  P(A) - P(A \cup B)  |
|  |  P (A) + \overline{(A} \ \overline{\cap B})  |

If A and B are two events, then is equal to :

|  |
| --- |
|  |
|  |  P \overline{(A)} \ /P \overline{(B)}  |
|  |  \cfrac{1-P(A+B)}{\overline{P(B)}} |
|  |  \underline{1- P(AB)}  |
|  |  1- P(A/B)  |

If A then will be :

|  |
| --- |
|  |
|  | [0] |
|  |  \Phi  |
|  | A |
|  | B |

![ \Bigg] ]()is equal :

|  |
| --- |
|  |
|  |  \cfrac{P(A)}{P(A \cup B)}  |
|  |  \cfrac{P (\overline A \cap B)}{P(A \cap B)}  |
|  |  \cfrac{P \overline{(A)}}{P(A \cup B)}  |
|  |  \cfrac{P \overline{(B)}}{P(A \cup B)}  |

The period of x will be :

|  |
| --- |
|  |
|  |  \cfrac{3 \pi}{2}  |
|  |  2 \pi  |
|  |  \pi  |
|  |  \cfrac{\pi}{2}  |

equal to :

|  |
| --- |
|  |
|  |  \overrightarrow{(a} . \overrightarrow{c)} \overrightarrow{b} - \overrightarrow{(a} .  \overrightarrow{b)} . \overrightarrow{c}  |
|  |  \overrightarrow{(a} . \overrightarrow{c)} \overrightarrow{b} + \overrightarrow{(a} .  \overrightarrow{b)} . \overrightarrow{c}  |
|  |  \overrightarrow{(a} . \overrightarrow{b)} \overrightarrow{c} + \overrightarrow{(a} .  \overrightarrow{b)} . \overrightarrow{c}  |
|  |  \overrightarrow{(a} . \overrightarrow{b)} \overrightarrow{c} - \overrightarrow{(a} .  \overrightarrow{c)} . \overrightarrow{b}  |

The angle between the vectors (i+j) abd (j+k) is :

|  |
| --- |
|  |
|  |  \cfrac{\pi}{4}  |
|  |  0  |
|  |  \cfrac{\pi}{-4}  |
|  |  \cfrac{\pi}{3}  |

The area of the region bounded by the curves y = x sin x, axis of x, x= 0 and will be :

|  |
| --- |
|  |
|  |  8 \pi   |
|  |  4 \pi   |
|  |  2 \pi   |
|  |  \pi   |

log sin x dx is equal to :

|  |
| --- |
|  |
|  |  \pi \ log \Bigg[\cfrac{1}{-2} \Bigg]  |
|  |  \pi \ log \ 2  |
|  |  \pi \ log \Bigg[\cfrac{1}{2} \Bigg]  |
|  |  \cfrac{\pi}{2} \ log \ 2  |

f(x) dx is equal to :

|  |
| --- |
|  |
|  |  \overset{b}f (X-a-b) dX  |
|  |  \overset{a}f(a-X )dX  |
|  |  \overset{b}f(a+b-X )dX  |
|  | noneof these |

sin 2x log tan x dx is equal to :

|  |
| --- |
|  |
|  |  2 \pi  |
|  |  \pi  |
|  |  0  |
|  |  \pi /2  |

x dx is equal to :

|  |
| --- |
|  |
|  |  4 \pi  |
|  |  2 \pi  |
|  |  \pi  |
|  |  0  |

cot x dx is equal to :

|  |
| --- |
|  |
|  | log tan x + C |
|  | log sec x + C |
|  | log cosec x + C |
|  | log sin x + C |

If z = x + y iy then |z – 5| is equal to :

|  |
| --- |
|  |
|  |  \sqrt{(X - y)^2 \ + \ 5^2}  |
|  |  \sqrt{(X - 5)^5 \ + \ y^2}  |
|  |  \sqrt{X^2 \ + (y \ - \ 5)^2}  |
|  |  \sqrt{(X - 5)^5 \ + (y \ - \ 5)^2}  |

If are the roots of the equation then is equal is :

|  |
| --- |
|  |
|  |  \cfrac{7}{3}  |
|  |  \cfrac{2}{7}  |
|  |  \cfrac{-3}{7}  |
|  |  \cfrac{3}{7}  |

2,357 is equal to :

|  |
| --- |
|  |
|  |  \cfrac{2379}{999}  |
|  |  \cfrac{2355}{999}  |
|  |  \cfrac{2355}{997}  |
|  | none of these |

If the second term of a G.P. is 2 and the sum of its infinite terms is 8, then its first therm is :

|  |
| --- |
|  |
|  | 2 |
|  | 4 |
|  | 6 |
|  | 8 |

(1+2+3+….+n) is equal to :

|  |
| --- |
|  |
|  |  \Bigg[\cfrac{n(n \ + \ 1)}{2} \Bigg]^2  |
|  |  n^2  |
|  |  \cfrac{n(n \ + \ 1)}{2}  |
|  |  \cfrac{n(n \ - \ 1)}{2}  |

For an – 7n – 1 is divisible by :

|  |
| --- |
|  |
|  | 50 |
|  | 49 |
|  | 51 |
|  | 48 |

If x = 2 + , then + 6x is equal to :

|  |
| --- |
|  |
|  | 0 |
|  | 1 |
|  | 2 |
|  | 3 |

If + ….+ then ….. is equal is :

|  |
| --- |
|  |
|  |  n.2^{n-1}  |
|  |  (n - 1)^ \ {2n-1}  |
|  |  (n + 1)^ \ {2n}  |
|  |  2^{n-1} \ - \ 1  |

Determinate is equal to :

|  |
| --- |
|  |
|  |  a^2-b^2+c^2+d^2  |
|  |  a^2+b^2-c^2-d^2  |
|  |  (a^2+b^2) \ (c^2+d^2)  |
|  |  (a+b) \ (a-b)  |



is equal to :

|  |
| --- |
|  |
|  | - 6 |
|  | - 110 |
|  | 0 |
|  | 150 |

If A = ![ \bigg[ \overset{1}{0} \overset{0}{1} \bigg]]()then A2 is equal to:

|  |
| --- |
|  |
|  |  \bigg[ \overset{0}{0} \overset{0}{0} \bigg] |
|  |  \bigg[ \overset{0}{0} \overset{0}{1} \bigg] |
|  |  \bigg[ \overset{1}{0} \overset{0}{1} \bigg] |
|  |  \bigg[ \overset{1}{1} \overset{1}{1} \bigg] |

If A = ![ \bigg[ \overset{1}{0} \overset{1}{1} \bigg]]()then is equal to :

|  |
| --- |
|  |
|  |  \bigg[\overset{1}{0} \overset{n^n}{1} \bigg] |
|  |  \bigg[\overset{n}{0} \overset{n}{n} \bigg] |
|  |  \bigg[\overset{1}{0} \overset{n}{1} \bigg] |
|  |  \bigg[\overset{1}{0} \overset{1}{1} \bigg] |

If A and B are the invertible matrix of the required order then the value of will be :

|  |
| --- |
|  |
|  |  [(AB)']^{-1}  |
|  |  A^{-1} B^{-1}  |
|  |  B^{-1}A^{-1}   |
|  |  (BA)^{-1}  |

The value of sin 3x is :

|  |
| --- |
|  |
|  |  4 \ sin \ X \ - \ 3 sin^3 \ X  |
|  |  4 \ sin \ X \ + \ 3 sin^3 \ X  |
|  |  3 \ sin \ X \ - \ 4 \ sin^3 \ X  |
|  |  3 \ sin \ X \ + \ 4 \ sin^3 \ X  |

The imaginary roots of is :

|  |
| --- |
|  |
|  |  \cfrac{1 \ \underline{+}\ \sqrt{3i}}{4}  |
|  |  \underline{+} \ i  |
|  |  \cfrac{-\ 1 \ \underline{+}\ \sqrt{3}}{2}  |
|  |  \cfrac{1 \ \underline{+}\ \sqrt{3i}}{2}  |

The argument and modulus of the is :

|  |
| --- |
|  |
|  |  1, \ sin\ h \theta  |
|  |  1, \ \pi/2  |
|  |  e^\ {cos} \ \theta ,\ sin\ h \theta  |
|  |  e^\ {sin} \ \theta ,\ sin\ h \theta  |

The minimum distance of a point (x, y) from a line ax + by + c = 0, is :

|  |
| --- |
|  |
|  |  \cfrac{|aX1 + by1 + c|}{\sqrt{a^2 + b^2}}  |
|  |  \cfrac{|aX1 + by1 + c|}{\sqrt{a^2 + b^2-c}}  |
|  | \cfrac{|aX1 + by1 + c|}{\sqrt{a^2 + b^2+c^2}} |
|  |  \cfrac{|aX1 + by1 + c|}{\sqrt{a^2 + b^2+c}}  |

A straight line through ( 1, 1) and parallel to the line 2x + 3y – 7 = 0 is :

|  |
| --- |
|  |
|  | 2x + 3y + 5 = 0 |
|  | 3x – 2y + 7 = 0 |
|  | 3x + 2y – 8 = 0 |
|  | 2x + 3y – 5 = 0 |

Equation of the straight line passing through the points (-1, 3) and (4, -2) is :

|  |
| --- |
|  |
|  | x- y = 3 |
|  | x + y = 3 |
|  | x – y = 2 |
|  | x + y = 2 |

The general equation of circle passing through the point of intersection of circle S = 0 and line P = 0, is :

|  |
| --- |
|  |
|  |  S\ +\ \lambda P = 0, \lambda \in R  |
|  | 6S + 4P = 0 |
|  | 3S + 4P = 0 |
|  | 4S + 5P = 0 |

The equation of the radial axis of two circle and , is :

|  |
| --- |
|  |
|  |  2\ (g_1 - g_2)\ X + 2  (f_1 - f_2)\ y - c_1 - c_2 =0  |
|  |  2\ (g_2 - g_1)\ X + 2  (f_1 - f_2)\ y + c_1 - c_2 =\ 0  |
|  |  2\ (g_1 - g_2)\ X + 2  (f_1 - f_2)\ y + c_1 - c_2 =\ 0  |
|  |  2\ (g_1 - g_2)\ X + 2  (f_1 - f_2)\ y + c_2 - c_1 =\ 0  |

If f (x) = cos (log x), then f(x) f(y) – 1 ![ [f \overset{(\underline X)}{y} - f (Xy) ] ]()is equal to :

|  |
| --- |
|  |
|  | 0 |
|  | f(x+y) |
|  |  f \overset{(\underline X)}{y}  |
|  | f(xy) |

If f(x) = = y, then the value of f(y) is :

|  |
| --- |
|  |
|  | 1 –x |
|  | x + 1 |
|  | x – 1 |
|  | x |

![ + \cfrac{1}{2n} \bigg] ]()is equal to :

|  |
| --- |
|  |
|  |  \cfrac{1}{2} \ log \ 2  |
|  |  3 \ log \ 2  |
|  |  \cfrac{1}{3} \ log \ 2  |
|  |  \cfrac{1}{2} \ log \ 3  |

is equal to :

|  |
| --- |
|  |
|  |  \infty  |
|  | 0 |
|  | a |
|  | 2a |

is equal to :

|  |
| --- |
|  |
|  | 1 |
|  |  2^X \ log \ 2  |
|  | x log 2 |
|  | 0 |

Differential coefficient of will be :

|  |
| --- |
|  |
|  |  \cfrac{3}{2_X}  |
|  |  \cfrac{2}{3_X}  |
|  |  \cfrac{3}{2} \ X  |
|  |  \cfrac{3X^2}{2}  |

(tan x ) is equal to :

|  |
| --- |
|  |
|  |  cosec^2 \ X  |
|  | sec x tan x |
|  | cosec x cot x |
|  |  sec^2 \ X  |

The coordinates of the point where the tangent to the curve x2 + y2 – 2x – 3 = 0 is parallel to the axis of x is :

|  |
| --- |
|  |
|  |  1. \ \underline{+} \ \sqrt{3}  |
|  |  (1,0)  |
|  |  1, \ \underline{+} \ 2  |
|  |  (1. \ \underline{+}  \sqrt{2} ) |

The point at which tangent to the curve y = at the point (0, 1) meets the x-axis is :

|  |
| --- |
|  |
|  | (1, 0) |
|  | (- ½, 0) |
|  | (2, 0) |
|  | (0, 2) |

Maximum value of slope of a tangent to the curve y = + 2x – 27 will be :

|  |
| --- |
|  |
|  | 11 |
|  | - 4 |
|  | 5 |
|  | 2 |

m dx is equal to :

|  |
| --- |
|  |
|  |  -\ 2\ cos \ \sqrt{X} \ + \ C  |
|  |  2\ cos \ \sqrt{X} \ + \ C  |
|  |  2\ sin \ \sqrt{X} \ + \ C  |
|  |  sin \ \sqrt{X+} C  |

Correct statement is :

|  |
| --- |
|  |
|  |  (AB)^{-1} \ = \ B^{-1} A^{-1}  |
|  |  (AB)^{-1} \ = \ A^{-1} B^{-1}  |
|  |  (AB)^T \ = \ A^T B^T  |
|  |  (AB)^1 \ = \ A^1 B^1  |

If the matrix P =![\bigg[\overset{1}{-3}\ \underset{0}{2} \bigg]]() and Q ![\bigg[\overset{-1}{2}\ \underset{3}{0} \bigg]]()then the correct statement is :

|  |
| --- |
|  |
|  |  P\ +\ Q \ = \ I  |
|  |  PQ\ \ne \ QP  |
|  |  Q^2 \ = \ Q  |
|  |  P^2 \ = \ P  |