Indices

We know that the result of a repeated addition can be held by multiplication e.g.

$$4+4+4+4+4=5(4)=20$$
$$a+a+a+a+a=5(a)=5a$$

Indices

We know that the result of a repeated addition can be held by multiplication e.g.

$$4 + 4 + 4 + 4 + 4 = 5(4) = 20$$
$$a + a + a + a + a = 5(a) = 5a$$

Indices

Now,

$$4 \times 4 \times 4 \times 4 \times 4 = 4^5,$$
$$a \times a \times a \times a \times a = a^5.$$

It may be noticed that in the first case 4 is multiplied 5 times and in the second case'a' is multiplied 5 times.

Indices

Now,

$$4 \times 4 \times 4 \times 4 \times 4 = 4^5,$$
$$a \times a \times a \times a \times a = a^5.$$

It may be noticed that in the first case 4 is multiplied 5 times and in the second case'a' is multiplied 5 times. In all such cases a factor which multiplies is called the "base" and the number of times it is multiplied is called the "power" or the "index". Therefore, "4" and "a" are the bases and "5" is the index for both.

Indices

Now,

$$4 \times 4 \times 4 \times 4 \times 4 = 4^5,$$
$$a \times a \times a \times a \times a = a^5.$$

It may be noticed that in the first case 4 is multiplied 5 times and in the second case'a' is multiplied 5 times. In all such cases a factor which multiplies is called the "base" and the number of times it is multiplied is called the "power" or the "index". Therefore, "4" and "a" are the bases and "5" is the index for both. Any base raised to the power zero is deffied to be 1; i.e. $a^o = 1$. We also define $\sqrt[r]{a} = a^1/_r$

Indices

Now,

$$4 \times 4 \times 4 \times 4 \times 4 = 4^5,$$
$$a \times a \times a \times a \times a = a^5.$$

It may be noticed that in the first case 4 is multiplied 5 times and in the second case'a' is multiplied 5 times. In all such cases a factor which multiplies is called the "base" and the number of times it is multiplied is called the "power" or the "index". Therefore, "4" and "a" are the bases and "5" is the index for both. Any base raised to the power zero is deffied to be 1; i.e. $a^o = 1$. We also define $\sqrt[r]{a} = a^1/_r$

Indices

If n is a positive integer, and 'a' is a real number, i.e. $n \in N$ and a $\in R$ (where N is the set of positive integers and R is the set of real numbers), 'a' is used to denote the continued product of n factors each equal to 'a' as shown below:

$$a^n = a \times a \times a \ldots, \text{ to } n \text{ factors.}$$

Indices

If n is a positive integer, and 'a' is a real number, i.e. $n \in N$ and a $\in R$ (where N is the set of positive integers and R is the set of real numbers), 'a' is used to denote the continued product of n factors each equal to 'a' as shown below:

$$a^n = a \times a \times a \ldots, \text{ to } n \text{ factors.}$$

Here a^n is a power of a whose base is a and the index or power is n"

Indices

If n is a positive integer, and ‘a’ is a real number, i.e. $n \in N$ and a $\in R$ (where N is the set of positive integers and R is the set of real numbers), ‘a’ is used to denote the continued product of n factors each equal to ‘a’ as shown below:

$$a^n = a \times a \times a \ldots, \text{ to } n \text{ factors.}$$

Here a^n is a power of a whose base is a and the index or power is n“ For example, in $3 \times 3 \times 3 \times 3 = 3^4, 3$ is base and 4 is index or power.

Indices

If n is a positive integer, and ‘a’ is a real number, i.e. $n \in N$ and a $\in R$ (where N is the set of positive integers and R is the set of real numbers), ‘a’ is used to denote the continued product of n factors each equal to ‘a’ as shown below:

$$a^n = a \times a \times a \ldots, \text{ to } n \text{ factors.}$$

Here a^n is a power of a whose base is a and the index or power is n“ For example, in $3 \times 3 \times 3 \times 3 = 3^4$, 3 is base and 4 is index or power.

Indices

Law 1: $a^m \times a^n = a^{m+n}$, when m and n are positive integers;

Law 2: $a^m / a^n = a^{m-n}$, when m and n are positive integers and $m > n$.

Indices

Law 1: $a^m \times a^n = a^{m+n}$, when m and n are positive integers;

Law 2: $a^m / a^n = a^{m-n}$, when m and n are positive integers and $m > n$.

Law 3: $(a^m)^n = a^{mn}$. where m and n are positive integers

Indices

Law 1: $a^m \times a^n = a^{m+n}$, when m and n are positive integers;

Law 2: $a^m / a^n = a^{m-n}$, when m and n are positive integers and $m > n$.

Law 3: $(a^m)^n = a^{mn}$. where m and n are positive integers

Law 4: $(ab)^n = a^n \cdot b^n$ when n can take all of the values.

Indices

Law 1: $a^m \times a^n = a^{m+n}$, when m and n are positive integers;

Law 2: $a^m / a^n = a^{m-n}$, when m and n are positive integers and $m > n$.

Law 3: $(a^m)^n = a^{mn}$. where m and n are positive integers

Law 4: $(ab)^n = a^n \cdot b^n$ when n can take all of the values.

Indices

Law 1: $a^m \times a^n = a^{m+n}$, when m and n are positive integers;

Law 2: $a^m/a^n = a^{m-n}$, when m and n are positive integers and $m > n$.

Law 3: $(a^m)^n = a^{mn}$. where m and n are positive integers

Law 4: $(ab)^n = a^n \cdot b^n$ when n can take all of the values.

Summary

- $a^m \times a^n = a^{m+n}$ (base must be same)
  Ex. $2^3 \times 2^2 = 2^{3+2} = 2^5$

Summary

- $a^m \times a^n = a^{m+n}$ (base must be same)
  Ex. $2^3 \times 2^2 = 2^{3+2} = 2^5$
- $a^m \times a^n = a^{m-n}$

Summary

- $a^m \times a^n = a^{m+n}$ (base must be same)
  Ex. $2^3 \times 2^2 = 2^{3+2} = 2^5$
- $a^m \times a^n = a^{m-n}$
  Ex. $2^5 \times 2^3 = 2^{5-3} = 2^2$

Summary

- $a^m \times a^n = a^{m+n}$ (base must be same)
  Ex. $2^3 \times 2^2 = 2^{3+2} = 2^5$
- $a^m \times a^n = a^{m-n}$
  Ex. $2^5 \times 2^3 = 2^{5-3} = 2^2$
- $(a^m)^n = a^{mn}$

Summary

- $a^m \times a^n = a^{m+n}$ (base must be same)
  Ex. $2^3 \times 2^2 = 2^{3+2} = 2^5$
- $a^m \times a^n = a^{m-n}$
  Ex. $2^5 \times 2^3 = 2^{5-3} = 2^2$
- $(a^m)^n = a^{mn}$
  Ex. $(2) = 2^{5\times 2} = 2^{10}$

Summary

- $a^m \times a^n = a^{m+n}$ (base must be same)
  Ex. $2^3 \times 2^2 = 2^{3+2} = 2^5$
- $a^m \times a^n = a^{m-n}$
  Ex. $2^5 \times 2^3 = 2^{5-3} = 2^2$
- $(a^m)^n = a^{mn}$
  Ex. $(2) = 2^{5\times 2} = 2^{10}$
- $a^o = 1$

Summary

- $a^m \times a^n = a^{m+n}$ (base must be same)
  Ex. $2^3 \times 2^2 = 2^{3+2} = 2^5$
- $a^m \times a^n = a^{m-n}$
  Ex. $2^5 \times 2^3 = 2^{5-3} = 2^2$
- $(a^m)^n = a^{mn}$
  Ex. $(2) = 2^{5\times 2} = 2^{10}$
- $a^o = 1$
  Ex. $2^0 = 1, 3^0 = 1$

Summary

- $a^m \times a^n = a^{m+n}$ (base must be same)
  Ex. $2^3 \times 2^2 = 2^{3+2} = 2^5$
- $a^m \times a^n = a^{m-n}$
  Ex. $2^5 \times 2^3 = 2^{5-3} = 2^2$
- $(a^m)^n = a^{mn}$
  Ex. $(2) = 2^{5\times 2} = 2^{10}$
- $a^o = 1$
  Ex. $2^0 = 1, 3^0 = 1$
- $a^{-m} = 1/a^m$ and l/ $a = a^m$

Summary

- $a^m \times a^n = a^{m+n}$ (base must be same)
  Ex. $2^3 \times 2^2 = 2^{3+2} = 2^5$
- $a^m \times a^n = a^{m-n}$
  Ex. $2^5 \times 2^3 = 2^{5-3} = 2^2$
- $(a^m)^n = a^{mn}$
  Ex. $(2) = 2^{5\times 2} = 2^{10}$
- $a^o = 1$
  Ex. $2^0 = 1, 3^0 = 1$
- $a^{-m} = 1/a^m$ and $\mathrm{l}/\ a = a^m$
  Ex. $2^{-3} = 1/2^3$ and $1/2^{-5} = 2^5$

Summary

- $a^m \times a^n = a^{m+n}$ (base must be same)
  Ex. $2^3 \times 2^2 = 2^{3+2} = 2^5$
- $a^m \times a^n = a^{m-n}$
  Ex. $2^5 \times 2^3 = 2^{5-3} = 2^2$
- $(a^m)^n = a^{mn}$
  Ex. $(2) = 2^{5\times 2} = 2^{10}$
- $a^o = 1$
  Ex. $2^0 = 1, 3^0 = 1$
- $a^{-m} = 1/a^m$ and $\text{l}/\ a = a^m$
  Ex. $2^{-3} = 1/2^3$ and $1/2^{-5} = 2^5$

Summary

- If $a^x = a^y$, then $x = y$
- If $x^a = y^a$, then $x = y$

Summary

- If $a^x = a^y$, then $x = y$
- If $x^a = y^a$, then $x = y$
- $\sqrt[m]{a} = a^{1/m}, \sqrt{X} = x^{1/2}, \sqrt{4} = (2^2)^{1/2} = 2^{1/2 \times 2} = 2$

Summary

- If $a^x = a^y$, then $x = y$
- If $x^a = y^a$, then $x = y$
- $\sqrt[m]{a} = a^{1/m}, \sqrt{X} = x^{1/2}, \sqrt{4} = (2^2)^{1/2} = 2^{1/2 \times 2} = 2$

  Ex. $\sqrt[3]{8} = 8^{1/3} = (2^3)^{1/3} = 2^{3 \times 1/3 = 2}$

Summary

- If $a^x = a^y$, then $x = y$
- If $x^a = y^a$, then $x = y$
- $\sqrt[m]{a} = a^{1/m}, \sqrt{X} = x^{1/2}, \sqrt{4} = (2^2)^{1/2} = 2^{1/2 \times 2} = 2$
  Ex. $\sqrt[3]{8} = 8^{1/3} = (2^3)^{1/3} = 2^{3 \times 1/3_{=2}}$

Question

$4x^{-1/4}$ is expressed as

Question

$4x^{-1/4}$ is expressed as

Options

(a) $-4x^{1/4}$ (b) x^{-1} (c) $4/x^{1/4}$ (d) none of these

Question

$4x^{-1/4}$ is expressed as

Options

(a) $-4x^{1/4}$ (b) x^{-1} (c) $4/x^{1/4}$ (d) none of these

Question

The value of $8^{1/3}$ is

Question

The value of $8^{1/3}$ is

Options

(a) $3\sqrt{2}$ (b) 4 (c) 2 (d) none of these

Question

The value of $8^{1/3}$ is

Options

(a) $3\sqrt{2}$ (b) 4 (c) 2 (d) none of these

Question

The value of $2 \times (32)^{1/5}$ is

Question

The value of $2 \times (32)^{1/5}$ is

Options

(a) 2 (b) 10 (c) 4 (d) none of these

Question

The value of $2 \times (32)^{1/5}$ is

Options

(a) 2 (b) 10 (c) 4 (d) none of these

Question

The value of $4/(32)^{1/5}$ is

Question

The value of $4/(32)^{1/5}$ is

Options

(a) 8 (b) 2 (c) 4 (d) none of these

Question

The value of $4/(32)^{1/5}$ is

Options

(a) 8 (b) 2 (c) 4 (d) none of these

Question

The value of $(8/27)^{1/3}$ is

Question

The value of $(8/27)^{1/3}$ is

Options

(a) 2/3 (b) 3/2 (c) 2/9 (d) none of these

Question

The value of $(8/27)^{1/3}$ is

Options

(a) $2/3$ (b) $3/2$ (c) $2/9$ (d) none of these

Question

The value of $2(256)^{-1/8}$ is

Question

The value of $2(256)^{-1/8}$ is

Options

(a) 1 (b) 2 (c) 1/2 (d) none of these

Question

The value of $2(256)^{-1/8}$ is

Options

(a) 1 (b) 2 (c) 1/2 (d) none of these

Question

$2^{1/2}.4^{3/4}$ is equal to

Question

$2^{1/2}.4^{3/4}$ is equal to

Options

(a) a fraction (b) a positive integer (c) a negative integer (d) none of these

Question

$2^{1/2}.4^{3/4}$ is equal to

Options

(a) a fraction (b) a positive integer (c) a negative integer (d) none of these

Question

$(\frac{81x^4}{y^{-8}})^{\frac{1}{4}}$ has simplified value equal to

Question

$(\frac{81x^4}{y^{-8}})^{\frac{1}{4}}$ has simplified value equal to

Options

(a) xy^2 (b) x^2y (c) $9xy^2$ (d) none of these

Question

$\left(\frac{81x^4}{y^{-8}}\right)^{\frac{1}{4}}$ has simplified value equal to

Options

(a) xy^2 (b) x^2y (c) $9xy^2$ (d) none of these

Question

$x^{a-b} \times x^{b-c} \times x^{c-a}$ is equal to

Question

$x^{a-b} \times x^{b-c} \times x^{c-a}$ is equal to

Options

(a) x (b) 1 (c) 0 (d) none of these

Question

$x^{a-b} \times x^{b-c} \times x^{c-a}$ is equal to

Options

(a) x (b) 1 (c) 0 (d) none of these

Question

The value of $(\frac{2p^2q^3}{3xy})^0$ where $p, q, x, y \neq 0$ is equal to

Question

The value of $(\frac{2p^2q^3}{3xy})^0$ where $p, q, x, y \neq 0$ is equal to

Options

(a) 0 (b) 2/3 (c) 1 (d) none of these

Question

The value of $(\frac{2p^2q^3}{3xy})^0$ where $p, q, x, y \neq 0$ is equal to

Options

(a) 0 (b) 2/3 (c) 1 (d) none of these

Question

$\{(3^3)^2 \times (4^2)^3 \times (5^3)^2\}/\{(3^2)^3 \times (4^3)^2 \times (5)\}$ is

Question

$\{(3^3)^2 \times (4^2)^3 \times (5^3)^2\}/\{(3^2)^3 \times (4^3)^2 \times (5)\}$ is

Options

(a) 3/4 (b) 4/5 (c) 4/7 (d) 1

Question

$\{(3^3)^2 \times (4^2)^3 \times (5^3)^2\}/\{(3^2)^3 \times (4^3)^2 \times (5)\}$ is

Options

(a) $3/4$ (b) $4/5$ (c) $4/7$ (d) 1

Question

Which is True ?

Question

Which is True ?

Options

(a) $2^0 > (1/2)^0$ (b) $2^0 < (1/2)^0$ (c) $2^0 = (1/2)^0$ (d) none of these

Question

Which is True ?

Options

(a) $2^0 > (1/2)^0$ (b) $2^0 < (1/2)^0$ (c) $2^0 = (1/2)^0$ (d) none of these

Question

If $x^{1/p} = y^{1/q} = z^{1/r}$ and $xyz = 1$, then the value of $p + q + r$ is

Question

If $x^{1/p} = y^{1/q} = z^{1/r}$ and $xyz = 1$, then the value of $p + q + r$ is

Options

(a) 1 (b) 0 (c) 1/2 (d) none of these

Question

If $x^{1/p} = y^{1/q} = z^{1/r}$ and $xyz = 1$, then the value of $p + q + r$ is

Options

(a) 1 (b) 0 (c) 1/2 (d) none of these

Question

The value of $y^{a-b} \times y^{b-c} \times y^{c-a} \times y^{-a-b}$ is

Question

The value of $y^{a-b} \times y^{b-c} \times y^{c-a} \times y^{-a-b}$ is

Options

(a) y^{a+b} (b) y (c) 1 (d) $1/y^{a+b}$

Question

The value of $y^{a-b} \times y^{b-c} \times y^{c-a} \times y^{-a-b}$ is

Options

(a) y^{a+b} (b) y (c) 1 (d) $1/y^{a+b}$

Question

The True option is

Question

The True option is

Options

(a) $x^{2/3} = ^{3}\sqrt{x^2}$ (b) $x^{2/3} = \sqrt{x^3}$ (c) $x^{2/3} > 3\sqrt{x^2}$ (d) $x^{2/3} < 3\sqrt{x^2}$

Question

The True option is

Options

(a) $x^{2/3} = ^3\sqrt{x^2}$ (b) $x^{2/3} = \sqrt{x^3}$ (c) $x^{2/3} > 3\sqrt{x^2}$ (d) $x^{2/3} < 3\sqrt{x^2}$

Question

The simplified value of $16x^{-3}y^{2} \times 8^{-1}x^{3}y^{-2}$ is

Question

The simplified value of $16x^{-3}y^2 \times 8^{-1}x^3y^{-2}$ is

Options

(a) $2xy$ (b) $xy/2$ (c) 2 (d) none of these

Question

The simplified value of $16x^{-3}y^2 \times 8^{-1}x^3y^{-2}$ is

Options

(a) $2xy$ (b) $xy/2$ (c) 2 (d) none of these

Question

The value of $(8/27)^{-1/3} \times (32/243)^{-1/5}$ is

Question

The value of $(8/27)^{-1/3} \times (32/243)^{-1/5}$ is

Options

(a) $9/4$ (b) $4/9$ (c) $2/3$ (d) none of these

Question

The value of $(8/27)^{-1/3} \times (32/243)^{-1/5}$ is

Options

(a) $9/4$ (b) $4/9$ (c) $2/3$ (d) none of these

Question

The value of
$\{(x+y)^{2/3}(x-y)^{3/2}/\sqrt{x+y} \times \sqrt{(x-y)^3}\}^6$ is

Question

The value of
$\{(x+y)^{2/3}(x-y)^{3/2}/\sqrt{x+y} \times \sqrt{(x-y)^3}\}^6$ is

Options

(a) $(x+y)^2$ (b) (x-y) (c) $x+y$ (d) none of these

Question

The value of
$\{(x+y)^{2/3}(x-y)^{3/2}/\sqrt{x+y} \times \sqrt{(x-y)^3}\}^6$ is

Options

(a) $(x+y)^2$ (b) (x-y) (c) $x+y$ (d) none of these

Question

Simplified value of $(125)^{2/3} \times \sqrt{25} \times 3\sqrt{5^3} \times 5^{1/2}$ is

Question

Simplified value of $(125)^{2/3} \times \sqrt{25} \times 3\sqrt{5^3} \times 5^{1/2}$ is

Options

(a) 5 (b) 1/5 (c) 1 (d) none of these

Question

Simplified value of $(125)^{2/3} \times \sqrt{25} \times 3\sqrt{5^3} \times 5^{1/2}$ is

Options

(a) 5 (b) $1/5$ (c) 1 (d) none of these

Question

$[\{(2)^{1/2} \cdot (4)^{3/4} \cdot (8)^{5/6} \cdot (16)^{7/8} \cdot (32)^{9/10}\}^4]^{3/25}$ is

Question

$[\{(2)^{1/2} \cdot (4)^{3/4} \cdot (8)^{5/6} \cdot (16)^{7/8} \cdot (32)^{9/10}\}^{4}]^{3/25}$ is

Options

(a) A fraction (b) an integer (c) 1 (d) none of these

Question

$[\{(2)^{1/2} \cdot (4)^{3/4} \cdot (8)^{5/6} \cdot (16)^{7/8} \cdot (32)^{9/10}\}^4]^{3/25}$ is

Options

(a) A fraction (b) an integer (c) 1 (d) none of these

Question

$[1 - \{1 - (1 - x^2)^{-1}\}^{-1}]^{-1/2}$ is equal to

Question

$[1 - \{1 - (1 - x^2)^{-1}\}^{-1}]^{-1/2}$ is equal to

Options

(a) x (b) $1/x$ (c) 1 (d) none of these

Question

$[1-\{1-(1-x^2)^{-1}\}^{-1}]^{-1/2}$ is equal to

Options

(a) x (b) $1/x$ (c) 1 (d) none of these

Question

$\left[(x^n)^{n-\frac{1}{n}}\right]^{\frac{1}{n+1}}$ is equal to

Question

$\left[(x^n)^{n-\frac{1}{n}}\right]^{\frac{1}{n+1}}$ is equal to

Options

(a) x^n (b) x^{n+1} (c) x^{n-1} (d) none of these

Question

$\left[(x^n)^{n-\frac{1}{n}}\right]^{\frac{1}{n+1}}$ is equal to

Options

(a) x^n (b) x^{n+1} (c) x^{n-1} (d) none of these

Question

If $a^3 - b^3 = (a-b)(a^2 + ab + b^2)$, then the simplified form of

$$\left[\frac{x^1}{x^m}\right]^{1^2+1m+m^2} \times \left[\frac{x^m}{x^n}\right]^{m^2+r+n^2} \times \left[\frac{x^n}{x^1}\right]^{1^2+\ln+n^2}$$

Question

If $a^3 - b^3 = (a-b)(a^2+ab+b^2)$, then the simplified form of

$$\left[\frac{x^1}{x^m}\right]^{1^2+1m+m^2} \times \left[\frac{x^m}{x^n}\right]^{m^2+r+n^2} \times \left[\frac{x^n}{x^1}\right]^{1^2+\ln+n^2}$$

Options

(a) 0 (b) 1 (c) x (d) none of these

Question

If $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$, then the simplified form of

$$\left[\frac{x^1}{x^m}\right]^{1^2+1m+m^2} \times \left[\frac{x^m}{x^n}\right]^{m^2+r+n^2} \times \left[\frac{x^n}{x^1}\right]^{1^2+\ln+n^2}$$

Options

(a) 0 (b) 1 (c) x (d) none of these

Question

Using $(a-b)^3 = a^3 - b^3 - 3ab(ab)$ tick the correct of these when $x = p^{1/3} - p^{-1/3}$

Question

Using $(a-b)^3 = a^3 - b^3 - 3ab(ab)$ tick the correct of these when $x = p^{1/3} - p^{-1/3}$

Options

(a) $x^3 + 3x = p + 1/p$ (b) $x^3 + 3x = p - 1/p$
(c) $x^3 + 3x = p + 1$ (d) none of these

Question

Using $(a-b)^3 = a^3 - b^3 - 3ab(ab)$ tick the correct of these when $x = p^{1/3} - p^{-1/3}$

Options

(a) $x^3 + 3x = p + 1/p$ (b) $x^3 + 3x = p - 1/p$
(c) $x^3 + 3x = p + 1$ (d) none of these

Question

On simplification, $1/(1 + a^{m-n} + a^{m-p}) + 1/(1 + a^{n-m} + a^{n-p}) + 1/(1 + a^{p-m} + a^{p-n})$ is equal to

Question

On simplification, $1/(1 + a^{m-n} + a^{m-p}) + 1/(1 + a^{n-m} + a^{n-p}) + 1/(1 + a^{p-m} + a^{p-n})$ is equal to

Options

(a) 0 (b) a (c) 1 (d) $1/a$

Question

On simplification, $1/(1+a^{m-n}+a^{m-p})+1/(1+a^{n-m}+a^{n-p})+1/(1+a^{p-m}+a^{p-n})$ is equal to

Options

(a) 0 (b) a (c) 1 (d) $1/a$

Question

The value of $(\frac{X^a}{X^b})^{a+b} \times (\frac{X^b}{X^c})^{b+c} \times (\frac{X^c}{X^a})^{c+a}$

Question

The value of $(\frac{X^a}{X^b})^{a+b} \times (\frac{X^b}{X^c})^{b+c} \times (\frac{X^c}{X^a})^{c+a}$

Options

(a) 1 (b) 0 (c) 2 (d) none of these

Question

The value of $(\frac{X^a}{X^b})^{a+b} \times (\frac{X^b}{X^c})^{b+c} \times (\frac{X^c}{X^a})^{c+a}$

Options

(a) 1 (b) 0 (c) 2 (d) none of these

Question

If $x = 3^{\frac{1}{3}} + 3^{-\frac{1}{3}}$,then $3x^3 - 9x$ is

Question

If $x = 3^{\frac{1}{3}} + 3^{-\frac{1}{3}}$,then $3x^3 - 9x$ is

Options

(a) 15 (b) 10 (c) 12 (d) none of these

Question

If $x = 3^{\frac{1}{3}} + 3^{-\frac{1}{3}}$,then $3x^3 - 9x$ is

Options

(a) 15 (b) 10 (c) 12 (d) none of these

Question

If $a^x = b, b^y = c, c^z = a$, then xyz is

Question

If $a^x = b, b^y = c, c^z = a$, then xyz is

Options

(a) 1 (b) 2 (c) 3 (d) none of these

Question

If $a^x = b, b^y = c, c^z = a$, then xyz is

Options

(a) 1 (b) 2 (c) 3 (d) none of these

Question

The value of

$$\left(\frac{X^a}{X^b}\right)^{(a^2+ab+b^2)} \times \left(\frac{\chi^b}{x^c}\right)^{(b^2+bc+c^2)} \times \left(\frac{X^c}{X^a}\right)^{(c^2+ca+a^2)}$$

Question

The value of

$$\left(\frac{X^a}{X^b}\right)^{(a^2+ab+b^2)} \times \left(\frac{\chi^b}{x^c}\right)^{(b^2+bc+c^2)} \times \left(\frac{X^c}{X^a}\right)^{(c^2+ca+a^2)}$$

Options

(a) 1 (b) 0 (c) -1 (d) none of these

Question

The value of

$$\left(\frac{X^a}{X^b}\right)^{(a^2+ab+b^2)} \times \left(\frac{\chi^b}{x^c}\right)^{(b^2+bc+c^2)} \times \left(\frac{X^c}{X^a}\right)^{(c^2+ca+a^2)}$$

Options

(a) 1 (b) 0 (c) -1 (d) none of these

Question

If $2^X = 3^y = 6^{-z}, \frac{1}{X} + \frac{1}{y} + \frac{1}{z}$ is

Question

If $2^X = 3^y = 6^{-z}$, $\frac{1}{X} + \frac{1}{y} + \frac{1}{z}$ is

Options

(a) 1 (b) 0 (c) 2 (d) none of these

Question

If $2^X = 3^y = 6^{-z}$, $\frac{1}{X} + \frac{1}{y} + \frac{1}{z}$ is

Options

(a) 1 (b) 0 (c) 2 (d) none of these

Logarithm

The logarithm of a number to a given base is the index or the power to which the base must be raised to produce the number, i.e. to make it equal to the given number. If there are three quantities indicated by say a, x and n, they are related as follows:

Logarithm

The logarithm of a number to a given base is the index or the power to which the base must be raised to produce the number, i.e. to make it equal to the given number. If there are three quantities indicated by say a, x and n, they are related as follows:
If $a^x = n$, where $n > 0, a > 0$ and $a \neq 1$ then x is said to be the logarithm of the number n to the base 'a' symbolically it can be expressed as follows:

Logarithm

The logarithm of a number to a given base is the index or the power to which the base must be raised to produce the number, i.e. to make it equal to the given number. If there are three quantities indicated by say a, x and n, they are related as follows:
If $a^X = n$, where $n > 0, a > 0$ and $a \neq 1$ then x is said to be the logarithm of the number n to the base 'a' symbolically it can be expressed as follows:
$\log n = x$ i.e. the logarithm of n to the base 'a' is x.

Logarithm

The logarithm of a number to a given base is the index or the power to which the base must be raised to produce the number, i.e. to make it equal to the given number. If there are three quantities indicated by say a, x and n, they are related as follows:
If $a^X = n$, where $n > 0, a > 0$ and $a \neq 1$ then x is said to be the logarithm of the number n to the base 'a' symbolically it can be expressed as follows:
$\log n = x$ i.e. the logarithm of n to the base 'a' is x.

Logarithm

- The two equations $a^X = n$ and $x = \log_a n$ are only transformations of each other and should be remembered to change one form of the relation into the other.
- The logarithm of 1 to any base is zero. This is because any number raised to the power zero is one. Since $a^0 = 1, \log 1 = 0$

Logarithm

- The two equations $a^X = n$ and $x = \log_a n$ are only transformations of each other and should be remembered to change one form of the relation into the other.
- The logarithm of 1 to any base is zero. This is because any number raised to the power zero is one. Since $a^0 = 1, \log 1 = 0$
- The logarithm of any quantity to the same base is unity. This is because any quantity raised to the power 1 is that quantity only. Since $a^1 = a$, $\log a = 1$

Logarithm

- The two equations $a^X = n$ and $x = \log_a n$ are only transformations of each other and should be remembered to change one form of the relation into the other.
- The logarithm of 1 to any base is zero. This is because any number raised to the power zero is one. Since $a^0 = 1, \log 1 = 0$
- The logarithm of any quantity to the same base is unity. This is because any quantity raised to the power 1 is that quantity only. Since $a^1 = a$, $\log a = 1$

Logarithm

Law 1: Logarithm of the product of two numbers is equal to the sum of the logarithms of the numbers to the same base, i.e.

$$\log_a mn = \log_a m + \log_a n$$

Logarithm

Law 1: Logarithm of the product of two numbers is equal to the sum of the logarithms of the numbers to the same base, i.e.

$$\log_a mn = \log_a m + \log_a n$$

Law 2: The logarithm of the quotient of two numbers is equal to the difference of their logarithms to the same base,

Logarithm

Law 1: Logarithm of the product of two numbers is equal to the sum of the logarithms of the numbers to the same base, i.e.

$$\log_a mn = \log_a m + \log_a n$$

Law 2: The logarithm of the quotient of two numbers is equal to the difference of their logarithms to the same base, i.e.

$$\log_a \frac{m}{n} = \log_a m - \log_a n$$

Logarithm

Law 1: Logarithm of the product of two numbers is equal to the sum of the logarithms of the numbers to the same base, i.e.

$$\log_a mn = \log_a m + \log_a n$$

Law 2: The logarithm of the quotient of two numbers is equal to the difference of their logarithms to the same base, i.e.

$$\log_a \frac{m}{n} = \log_a m - \log_a n$$

Logarithm

Law 3: Logarithm of the number raised to the power is equal to the index of the power multiplied by the logarithm of the number to the same base i.e.

$$\log_a m^n = n \log_a m$$

Logarithm

Law 3: Logarithm of the number raised to the power is equal to the index of the power multiplied by the logarithm of the number to the same base i.e.

$$\log_a m^n = n \log_a m$$

Law 4: **Change of Base**. If the logarithm of a number to any base is given, then the logarithm of the same number to any other base can be determined from the following relation.

Logarithm

Law 3: Logarithm of the number raised to the power is equal to the index of the power multiplied by the logarithm of the number to the same base i.e.

$$\log_a m^n = n \log_a m$$

Law 4: **Change of Base**. If the logarithm of a number to any base is given, then the logarithm of the same number to any other base can be determined from the following relation.

$$\log_a m = \log_b m \log_a b = \log_b m = \frac{\log_a m}{\log_a b}$$

Logarithm

Law 3: Logarithm of the number raised to the power is equal to the index of the power multiplied by the logarithm of the number to the same base i.e.

$$\log_a m^n = n \log_a m$$

Law 4: **Change of Base**. If the logarithm of a number to any base is given, then the logarithm of the same number to any other base can be determined from the following relation.

$$\log_a m = \log_b m \log_a b = \log_b m = \frac{\log_a m}{\log_a b}$$

Logarithms

If x is the logarithm of a given number n with a given base then n is called the antilogarithm (antilog) of x to that base. This can be expressed as follows: If $\log n = x$ then $n = \text{anti}\log x$

Logarithms

If x is the logarithm of a given number n with a given base then n is called the antilogarithm (antilog) of x to that base. This can be expressed as follows: If $\log n = x$ then $n = \text{anti}\log x$

Logarithms

Let $x = \log_a m$ and $y = \log_y n$

$\therefore\ a^x = m$ and $a^y = n$

Logarithms

Let $x = \log_a m$ and $y = \log_y n$

$\therefore\ a^x = m$ and $a^y = n$

So $a^x a^y = mn$

Logarithms

Let $x = \log_a m$ and $y = \log_y n$
$\therefore\ a^x = m$ and $a^y = n$
So $a^x a^y = mn$
or $a^{x+y} = mn$

Logarithms

Let $x = \log_a m$ and $y = \log_y n$

$\therefore\ a^x = m$ and $a^y = n$

So $a^x a^y = mn$

or $a^{x+y} = mn$

or $x + y = \log_a mn$

Logarithms

Let $x = \log_a m$ and $y = \log_y n$
$\therefore\ a^x = m$ and $a^y = n$
So $a^x a^y = mn$
or $a^{x+y} = mn$
or $x + y = \log_a mn$
or $\log_a mn = \log_a m + \log_a n$

Logarithms

Let $x = \log_a m$ and $y = \log_y n$

$\therefore\ a^x = m$ and $a^y = n$

So $a^x a^y = mn$

or $a^{x+y} = mn$

or $x + y = \log_a mn$

or $\log_a mn = \log_a m + \log_a n$

Also, $(m/n) = a^x/a^y$

Logarithms

Let $x = \log_a m$ and $y = \log_y n$

$\therefore\ a^x = m$ and $a^y = n$

So $a^x a^y = mn$

or $a^{x+y} = mn$

or $x + y = \log_a mn$

or $\log_a mn = \log_a m + \log_a n$

Also, $(m/n) = a^x/a^y$

or $(m/n) = a^{x-y}$

Logarithms

Let $x = \log_a m$ and $y = \log_y n$

$\therefore$ $a^x = m$ and $a^y = n$

So $a^x a^y = mn$

or $a^{x+y} = mn$

or $x + y = \log_a mn$

or $\log_a mn = \log_a m + \log_a n$

Also, $(m/n) = a^x/a^y$

or $(m/n) = a^{x-y}$

or $\log_a(m/n) = (x - y)$

Logarithms

Let $x = \log_a m$ and $y = \log_y n$
$\therefore\ a^x = m$ and $a^y = n$
So $a^x a^y = mn$
or $a^{x+y} = mn$
or $x + y = \log_a mn$
or $\log_a mn = \log_a m + \log_a n$
Also, $(m/n) = a^x/a^y$
or $(m/n) = a^{x-y}$
or $\log_a(m/n) = (x - y)$
or $\log_a(m/n) = \log_a m - \log n$ $\quad [\log_a a = 1]$

Logarithms

Let $x = \log_a m$ and $y = \log_y n$
$\therefore$ $a^x = m$ and $a^y = n$
So $a^x a^y = mn$
or $a^{x+y} = mn$
or $x + y = \log_a mn$
or $\log_a mn = \log_a m + \log_a n$
Also, $(m/n) = a^x/a^y$
or $(m/n) = a^{x-y}$
or $\log_a(m/n) = (x - y)$
or $\log_a(m/n) = \log_a m - \log n$ $\quad [\log_a a = 1]$

Logarithms

Let $\log_b a = x$ and $\log_a b = y$

$a = b^X$ and $b = a^y$

Logarithms

Let $\log_b a = x$ and $\log_a b = y$

$a = b^X$ and $b = a^y$

so $a = (a^y)^x$

Logarithms

Let $\log_b a = x$ and $\log_a b = y$

$a = b^X$ and $b = a^y$

so $a = (a^y)^x$

or $a^{xy} = a$

Logarithms

Let $\log_b a = x$ and $\log_a b = y$

$a = b^X$ and $b = a^y$

so $a = (a^y)^x$

or $a^{xy} = a$

or $xy = 1$

Logarithms

Let $\log_b a = x$ and $\log_a b = y$

$a = b^X$ and $b = a^y$

so $a = (a^y)^x$

or $a^{xy} = a$

or $xy = 1$

or $\log_b a \times \log_a b = 1$

Logarithms

Let $\log_b a = x$ and $\log_a b = y$

$a = b^X$ and $b = a^y$

so $a = (a^y)^x$

or $a^{xy} = a$

or $xy = 1$

or $\log_b a \times \log_a b = 1$

Let $\log_b c = x \& \log_c b = y$

Logarithms

Let $\log_b a = x$ and $\log_a b = y$

$a = b^X$ and $b = a^y$

so $a = (a^y)^x$

or $a^{xy} = a$

or $xy = 1$

or $\log_b a \times \log_a b = 1$

Let $\log_b c = x \& \log_c b = y$

$c = b^x \ \& \ b = c^y$

Logarithms

Let $\log_b a = x$ and $\log_a b = y$

$a = b^X$ and $b = a^y$

so $a = (a^y)^x$

or $a^{xy} = a$

or $xy = 1$

or $\log_b a \times \log_a b = 1$

Let $\log_b c = x \& \log_c b = y$

$c = b^x \;\&\; b = c^y$

so $c = c^{xy}$ or $xy = 1$

Logarithms

Let $\log_b a = x$ and $\log_a b = y$

$a = b^X$ and $b = a^y$

so $a = (a^y)^x$

or $a^{xy} = a$

or $xy = 1$

or $\log_b a \times \log_a b = 1$

Let $\log_b c = x \& \log_c b = y$

$c = b^x \ \& \ b = c^y$

so $c = c^{xy}$ or $xy = 1$

$\log_b c \times \log_c b = 1$

Logarithms

Let $\log_b a = x$ and $\log_a b = y$

$a = b^X$ and $b = a^y$

so $a = (a^y)^x$

or $a^{xy} = a$

or $xy = 1$

or $\log_b a \times \log_a b = 1$

Let $\log_b c = x \& \log_c b = y$

$c = b^x \ \& \ b = c^y$

so $c = c^{xy}$ or $xy = 1$

$\log_b c \times \log_c b = 1$

Logarithms

- ⋆ $\log_a mn = \log_a m + \log_a n$
- ⋆ $\log_a(m/n) = \log_a m - \log_a n$

Logarithms

- ☆ $\log_a mn = \log_a m + \log_a n$
- ☆ $\log_a(m/n) = \log_a m - \log_a n$
- ☆ $\log_a m^n = n \log_a m$

Logarithms

- ⋆ $\log_a mn = \log_a m + \log_a n$
- ⋆ $\log_a(m/n) = \log_a m - \log_a n$
- ⋆ $\log_a m^n = n \log_a m$
- ⋆ $\log_a a = 1, a = 1$

Logarithms

- ⋆ $\log_a mn = \log_a m + \log_a n$
- ⋆ $\log_a(m/n) = \log_a m - \log_a n$
- ⋆ $\log_a m^n = n \log_a m$
- ⋆ $\log_a a = 1, a = 1$
- ⋆ $\log 1 = 0$

Logarithms

- ☆ $\log_a mn = \log_a m + \log_a n$
- ☆ $\log_a(m/n) = \log_a m - \log_a n$
- ☆ $\log_a m^n = n \log_a m$
- ☆ $\log_a a = 1, a = 1$
- ☆ $\log 1 = 0$
- ☆ $\log_b a \times \log_a b = 1$

Logarithms

- ☆ $\log_a mn = \log_a m + \log_a n$
- ☆ $\log_a(m/n) = \log_a m - \log_a n$
- ☆ $\log_a m^n = n \log_a m$
- ☆ $\log_a a = 1, a = 1$
- ☆ $\log 1 = 0$
- ☆ $\log_b a \times \log_a b = 1$
- ☆ $\log_b a \times \log_c b = \log_a b$

Logarithms

- ☆ $\log_a mn = \log_a m + \log_a n$
- ☆ $\log_a(m/n) = \log_a m - \log_a n$
- ☆ $\log_a m^n = n \log_a m$
- ☆ $\log_a a = 1, a = 1$
- ☆ $\log 1 = 0$
- ☆ $\log_b a \times \log_a b = 1$
- ☆ $\log_b a \times \log_c b = \log_a b$

Logarithms

- ⋆ $\log_b a = \log a / \log b$
- ⋆ $\log_b a = 1 / \log_a b$

Logarithms

- ☆ $\log_b a = \log a / \log b$
- ☆ $\log_b a = 1/\log_a b$
- ☆ $a^{\log_a x} = x$ (Inverse logarithm Property)

Logarithms

- ☆ $\log_b a = \log a / \log b$
- ☆ $\log_b a = 1 / \log_a b$
- ☆ $a^{\log_a x} = x$ (Inverse logarithm Property)
- ☆ The two equations $ax = n$ and $x = \log_a n$ are only transformations of each other and should be remembered to change one form of the relation into the other. Since $a_1 = a, \log_a^a = 1$

Logarithms

- ☆ $\log_b a = \log a / \log b$
- ☆ $\log_b a = 1/\log_a b$
- ☆ $a^{\log_a x} = x$ (Inverse logarithm Property)
- ☆ The two equations $ax = n$ and $x = \log_a n$ are only transformations of each other and should be remembered to change one form of the relation into the other. Since $a_1 = a, \log_a^a = 1$

Logarithms

Notes:

- ⋆ If base is understood, base is taken as 10
- ⋆ Thus $\log 10 = 1, \log 1 = 0$

Logarithms

Notes:

- ⋆ If base is understood, base is taken as 10
- ⋆ Thus $\log 10 = 1, \log 1 = 0$
- ⋆ Logarithm using base 10 is called Common logarithm and logarithm using base *e* is called Natural logarithm { $e = 2.33$ (approx.) called exponential number}.

Logarithms

Notes:

- ☆ If base is understood, base is taken as 10
- ☆ Thus $\log 10 = 1, \log 1 = 0$
- ☆ Logarithm using base 10 is called Common logarithm and logarithm using base e is called Natural logarithm $\{$ $e = 2.33$ (approx.) called exponential number$\}$.

Question

$\log 6 + \log 5$ is expressed as

Question

$\log 6 + \log 5$ is expressed as

Options

(a) $\log 11$ (b) $\log 30$ (c) $\log 5/6$ (d) none of these

Question

$\log 6 + \log 5$ is expressed as

Options

(a) $\log 11$ (b) $\log 30$ (c) $\log 5/6$ (d) none of these

Question

$\log_2 8$ is equal to

Question

$\log_2 8$ is equal to

Options

(a) 2 (b) 8 (c) 3 (d) none of these

Question

$\log_2 8$ is equal to

Options

(a) 2 (b) 8 (c) 3 (d) none of these

Question

$\log 32/4 is$ equal to

Question

$\log 32/4 is$ equal to

Options

(a) $\log 32/\log 4$ (b) $\log 32 - \log 4$ (c) 2^3
(d) none of these

Question

$\log 32/4 is$ equal to

Options

(a) $\log 32/\log 4$ (b) $\log 32 - \log 4$ (c) 2^3
(d) none of these

Question

$\log(1 \times 2 \times 3)$ is equal to

Question

$\log(1 \times 2 \times 3)$ is equal to

Options

(a) $\log 1 + \log 2 + \log 3$ (b) $\log 3$ (c) $\log 2$
(d) none of these

Question

$\log(1 \times 2 \times 3)$ is equal to

Options

(a) $\log 1 + \log 2 + \log 3$ (b) $\log 3$ (c) $\log 2$
(d) none of these

Question

The value of log 0.0001 to the base 0.1 is

Question

The value of log 0.0001 to the base 0.1 is

Options

(a) -4 (b) 4 (c) $1/4$ (d) none of these

Question

The value of log 0.0001 to the base 0.1 is

Options

(a) -4 (b) 4 (c) $1/4$ (d) none of these

Question

$If\, 2\log x = 4\log 3,$ the x is equal to

Question

If $2\log x = 4\log 3$, the x is equal to

Options

(a) 3 (b) 9 (c) 2 (d) none of these

Question

If $2\log x = 4\log 3$, the x is equal to

Options

(a) 3 (b) 9 (c) 2 (d) none of these

Question

$\log_{\sqrt{2}} 64$ is equal to

Question

$\log_{\sqrt{2}} 64$ is equal to

Options

(a) 12 (b) 6 (c) 1 (d) none of these

Question

$\log_{\sqrt{2}} 64$ is equal to

Options

(a) 12 (b) 6 (c) 1 (d) none of these

Question

$\log_{2\sqrt{3}} 1728$ is equal to

Question

$\log_{2\sqrt{3}} 1728$ is equal to

Options

(a) $2\sqrt{3}$ (b) 2 (c) 6 (d) none of these

Question

$\log_{2\sqrt{3}} 1728$ is equal to

Options

(a) $2\sqrt{3}$ (b) 2 (c) 6 (d) none of these

Question

log(1/81) to the base 9 is equal to

Question

log(1/81) to the base 9 is equal to

Options

(a) 2 (b) 1/2 (c) -2 (d) none of these

Question

log(1/81) to the base 9 is equal to

Options

(a) 2 (b) 1/2 (c) -2 (d) none of these

Question

$\log 0.0625 \textit{to}$ the base $2 \textit{is}$ equal to

Question

$\log 0.0625 to$ the base $2 is$ equal to

Options

(a) 4 (b) 5 (c) 1 (d) none of these

Question

$\log 0.0625 to$ the base $2 is$ equal to

Options

(a) 4 (b) 5 (c) 1 (d) none of these

Question

Given $\log 2 = 0.3010$ and $\log 3 = 0.4771$ the value of $\log 6$ is

Question

Given $\log 2 = 0.3010$ and $\log 3 = 0.4771$ the value of $\log 6$ is

Options

(a) 0.9030 (b) 0.9542 (c) 0.7781 (d) none of these

Question

Given $\log 2 = 0.3010$ and $\log 3 = 0.4771$ the value of $\log 6$ is

Options

(a) 0.9030 (b) 0.9542 (c) 0.7781 (d) none of these

Question

The value of $\log_2 \log_2 \log_2 16$

Question

The value of $\log_2 \log_2 \log_2 16$

Options

(a) 0 (b) 2 (c) 1 (d) none of these

Question

The value of $\log_2 \log_2 \log_2 16$

Options

(a) 0 (b) 2 (c) 1 (d) none of these

Question

The value of $\log \frac{1}{3}$ to the base 9 is

Question

The value of $\log \frac{1}{3}$ to the base 9 is

Options

(a) $-1/2$ (b) $1/2$ (c) 1 (d) none of these

Question

The value of $\log \frac{1}{3}$ to the base 9 is

Options

(a) $-1/2$ (b) $1/2$ (c) 1 (d) none of these

Question

If $\log x + \log y = \log(x + y)$, y can be expressed as

Question

If $\log x + \log y = \log(x + y)$, y can be expressed as

Options

(a) x-1 (b) x (c) $x/x - 1$ (d) none of these

Question

If $\log x + \log y = \log(x + y)$, y can be expressed as

Options

(a) x-1 (b) x (c) $x/x - 1$ (d) none of these

Question

The value of $\log_2[\log_2\{\log_3 (\log 27)\}]$ is equal to

Question

The value of $\log_2[\log_2\{\log_3\ (\log 27)\}]$ is equal to

Options

(a) 1 (b) 2 (c) 0 (d) none of these

Question

The value of $\log_2[\log_2\{\log_3 (\log 27)\}]$ is equal to

Options

(a) 1 (b) 2 (c) 0 (d) none of these

Question

If $\log_2 x + \log_4 x + \log_{16} x = 21/4$, these x is equal to

Question

If $\log_2 x + \log_4 x + \log_{16} x = 21/4$, these x is equal to

Options

(a) 8 (b) 4 (c) 16 (d) none of these

Question

If $\log_2 x + \log_4 x + \log_{16} x = 21/4$, these x is equal to

Options

(a) 8 (b) 4 (c) 16 (d) none of these

Question

Given that $\log_{10} 2 = x$ and $\log_{10} 3 = y$, the value of $\log_{10} 60$ is expressed as

Question

Given that $\log_{10} 2 = x$ and $\log_{10} 3 = y$, the value of $\log_{10} 60$ is expressed as

Options

(a) $x - y + 1$ (b) $x + y + 1$ (c) $x - y - 1$
(d) none of these

Question

Given that $\log_{10} 2 = x$ and $\log_{10} 3 = y$, the value of $\log_{10} 60$ is expressed as

Options

(a) $x - y + 1$ (b) $x + y + 1$ (c) $x - y - 1$
(d) none of these

Question

Given that $\log_{10} 2 = x$, $\log_{10} 3 = y$, then $\log_{10} 1.2$ is expressed in terms of x and y as

Question

Given that $\log_{10} 2 = x$, $\log_{10} 3 = y$, then $\log_{10} 1.2$ is expressed in terms of x and y as

Options

(a) $x + 2y - 1$ (b) $x + y - 1$ (c) $2x + y - 1$
(d) none of these

Question

Given that $\log_{10} 2 = x$, $\log_{10} 3 = y$, then $\log_{10} 1.2$ is expressed in terms of x and y as

Options

(a) $x + 2y - 1$ (b) $x + y - 1$ (c) $2x + y - 1$
(d) none of these

Question

Given that $\log x = m + n$ and $\log y = m - n$, the value of $\log 10x/y^2$ is expressed in terms of m and n as

Question

Given that $\log x = m + n$ and $\log y = m - n$, the value of $\log 10x/y^2$ is expressed in terms of m and n as

Options

(a) $1 - m + 3n$ (b) $m - 1 + 3n$ (c) $m + 3n + 1$ (d) none of these

Question

Given that $\log x = m + n$ and $\log y = m - n$, the value of $\log 10x/y^2$ is expressed in terms of m and n as

Options

(a) $1 - m + 3n$ (b) $m - 1 + 3n$ (c) $m + 3n + 1$ (d) none of these

Question

The simplified value of
$2 \log_{10} 5 + \log_{10} 8 - 1/2 \log_{10} 4$ is

Question

The simplified value of
$2\log_{10} 5 + \log_{10} 8 - 1/2 \log_{10} 4$ is

Options

(a) 1/2 (b) 4 (c) 2 (d) none of these

Question

The simplified value of

$2\log_{10} 5 + \log_{10} 8 - 1/2 \log_{10} 4$ is

Options

(a) 1/2 (b) 4 (c) 2 (d) none of these

Question

$\log[1-\{1-(1-x^2)^{-1}\}^{-1}]^{-1/2}$ can be written as

Question

$\log[1 - \{1 - (1 - x^2)^{-1}\}^{-1}]^{-1/2}$ can be written as

Options

(a) $\log x^2$ (b) $\log x$ (c) $\log 1/x$ (d) none of these

Question

$\log[1-\{1-(1-x^2)^{-1}\}^{-1}]^{-1/2}$ can be written as

Options

(a) $\log x^2$ (b) $\log x$ (c) $\log 1/x$ (d) none of these

Question

The simplified value of $\log \sqrt[4]{729\sqrt[3]{9^{1}27^{4/3}}}$ is

Question

The simplified value of $\log \sqrt[4]{729\sqrt[3]{9^1 27^{4/3}}}$ is

Options

(a) $\log 3$ (b) $\log 2$ (c) $\log^{1/2}$ (d) none of these

Question

The simplified value of $\log \sqrt[4]{729\sqrt[3]{9^1 27^{4/3}}}$ is

Options

(a) $\log 3$ (b) $\log 2$ (c) $\log^{1/2}$ (d) none of these

Question

The value of $(\log_b a \times \log_c b \times \log_a c)^3$ is equal to

Question

The value of $(\log_b a \times \log_c b \times \log_a c)^3$ is equal to

Options

(a) 3 (b) 0 (c) 1 (d) none of these

Question

The value of $(\log_b a \times \log_c b \times \log_a c)^3$ is equal to

Options

(a) 3 (b) 0 (c) 1 (d) none of these

Question

The logarithm of 64 to the base $2\sqrt{2}$ is

Question

The logarithm of 64 to the base $2\sqrt{2}$ is

Options

(a) 2 (b) $\sqrt{2}$ (c) 1/2 (d) none of these

Question

The logarithm of 64 to the base $2\sqrt{2}$ is

Options

(a) 2 (b) $\sqrt{2}$ (c) 1/2 (d) none of these

Question

The value of $log_8 25$ given $\log 2 = 0.3010$ is

Question

The value of $log_8 25$ given $\log 2 = 0.3010$ is

Options

(a) 1 (b) 2 (c) 1.5482 (d) none of these

Question

The value of $log_8 25$ given $\log 2 = 0.3010$ is

Options

(a) 1 (b) 2 (c) 1.5482 (d) none of these

Thank you