

1983 FI5.4

P 為一運算子使得 $P(A \cdot B) = P(A) + P(B)$ 。

$P(A) = y$ 的意思是 $A = 10^y$ 。若 $d = A \cdot B$, $P(A) = 1$ 及 $P(B) = 2$, 求 d 的值。

P is an operation such that $P(A \cdot B) = P(A) + P(B)$.

$P(A) = y$ means $A = 10^y$. If $d = A \cdot B$, $P(A) = 1$ and $P(B) = 2$, find the value of d .

1985 FG10.4

若 $A = \frac{3^n \cdot 9^{n+1}}{27^{n-1}}$, 求 A 的值。

If $A = \frac{3^n \cdot 9^{n+1}}{27^{n-1}}$, find the value of A .

1988 FG9.4

若 $C = \frac{3^{4n} \cdot 9^{n+4}}{27^{2n+2}}$, 求 C 的值。

If $C = \frac{3^{4n} \cdot 9^{n+4}}{27^{2n+2}}$, find the value of C .

1989 FG10.4

已知 $y = \frac{3(2^k) - 4(2^{k-2})}{2^k - 2^{k-1}}$, 求 y 的值。

If $y = \frac{3(2^k) - 4(2^{k-2})}{2^k - 2^{k-1}}$, find the value of y .

1992 FSI.1

已知 $A = (b^m)^n + b^{m+n}$ 。當 $b = 4$, $m = n = 1$ 時, 求 A 的值。

Given $A = (b^m)^n + b^{m+n}$. Find the value of A when $b = 4$, $m = n = 1$.

1992 FG8.2

若 $19 \times 243^{\frac{2}{5}} = b$, 求 b 的值。If $19 \times 243^{\frac{2}{5}} = b$, find the value of b .

1993 FI1.1

已知 $7^{2x} = 36$ 及 $7^{-x} = (6)^{-\frac{a}{2}}$, 求 a 的值。

Given that $7^{2x} = 36$ and $7^{-x} = (6)^{-\frac{a}{2}}$, find the value of a .

1996 FG6.3

若 n 是一正整數, $m^{2n} = 2$ 及 $c = 2m^{6n} - 4$, 求 c 的值。

If n is a positive integer, $m^{2n} = 2$ and $c = 2m^{6n} - 4$, find the value of c .

1997 FG1.2

代數式 $x^6 + x^6 + x^6 + \dots + x^6$ 有 x 項及其總和為 x^b 。求 b 的值。

There are x terms in the algebraic expression $x^6 + x^6 + x^6 + \dots + x^6$ and its sum is x^b . Find the value of b .

1999 FI5.1

若 $144^p = 10$, $1728^q = 5$ 及 $a = 12^{2p-3q}$, 求 a 之值。

If $144^p = 10$, $1728^q = 5$ and $a = 12^{2p-3q}$, find the value of a .

2005 FG2.3

已知 $2x + 5y = 3$ 。若 $c = \sqrt{4^{x+\frac{1}{2}} \times 32^y}$, 求 c 的值。

Given that $2x + 5y = 3$. If $c = \sqrt{4^{x+\frac{1}{2}} \times 32^y}$, find the value of c .

2006 FG2.3

若 $n \neq 0$ 及 $s = \left(\frac{20}{2^{2n+4} + 2^{2n+2}} \right)^{\frac{1}{n}}$, 求 s 的值。

If $n \neq 0$ and $s = \left(\frac{20}{2^{2n+4} + 2^{2n+2}} \right)^{\frac{1}{n}}$, find the value of s .

2007 FI3.2

若 $x^y = 3$ 及 $b = x^{3y} + 10$, 求 b 的值。

If $x^y = 3$ and $b = x^{3y} + 10$, find the value of b .

2008 HI9

設 m 和 n 為正整數。已知表達式 $\left(\left(\left((2)^2 \right)^2 \right)^{\dots} \right)^2 = \left(\left(\left((4)^4 \right)^4 \right)^{\dots} \right)^4$ 含有 m 個

2 及 n 個 4。若 $k = \frac{m}{n}$, 求 k 的值。

Let m and n be a positive integers. Given that the number 2 appears m times and the number 4 appears n times in the expansion $\left(\left(\left((2)^2 \right)^2 \right)^{\dots} \right)^2 = \left(\left(\left((4)^4 \right)^4 \right)^{\dots} \right)^4$.

If $k = \frac{m}{n}$, find the value of k .

2009 FI4.3

已知 $p = 9 \left(\frac{1}{2^{2009}} \right)^{\log(1)}$ ，求 p 的值。

Given that $p = 9 \left(\frac{1}{2^{2009}} \right)^{\log(1)}$, find the value of p .

2009 FG3.2

在 $\underbrace{99\dots9}_{2009\text{個}9} \times \underbrace{99\dots9}_{2009\text{個}9} + \underbrace{199\dots9}_{2009\text{個}9}$ 中，末位的 0 共有 R 個，求 R 的值。

There are R zeros at the end of $\underbrace{99\dots9}_{2009\text{ of }9\text{'s}} \times \underbrace{99\dots9}_{2009\text{ of }9\text{'s}} + 1 \underbrace{99\dots9}_{2009\text{ of }9\text{'s}}$, find the value of R .

2016 HI1

計算 $0.125^{2016} \times (2^{2017})^3$ 的值。

Find the value of $0.125^{2016} \times (2^{2017})^3$.

2016 FG2.4

設 d 及 f 為正整數及 $a_1 = 0.9$ 。若 $a_{i+1} = a_i^2$ 及 $\prod_{i=1}^4 a_i = \frac{3^d}{f}$ ，

求 d 的最小可能值。

Let d and f be positive integers and $a_1 = 0.9$. If $a_{i+1} = a_i^2$ and $\prod_{i=1}^4 a_i = \frac{3^d}{f}$,

determine the smallest possible value of d .

Answers

1983 FI5.4 1000	1985 FG10.4 243	1988 FG9.4 9	1989 FG10.4 4	1992 FSI.1 20
1992 FG8.2 171	1993 FI1.1 2	1996 FG6.3 12	1997 FG1.2 7	1999 FI5.1 2
2005 FG2.3 4	2006 FG2.3 $\frac{1}{4}$	2007 FI3.2 17	2008 HI9 2	2009 FI4.3 9
2009 FG3.2 4018	2016 HI1 8	2016 FG2.4 30		