1999 FG1.4

若 $\log_p x = 2$，$\log_q x = 3$，$\log_r x = 6$ 及 $\log_{pqr} x = d$，求 d 之值。

If $\log_p x = 2$, $\log_q x = 3$, $\log_r x = 6$ and $\log_{pqr} x = d$, find the value of d.

2001 HI1

如果 $4^a = 25^b = 10$，求 $\frac{1}{a}+\frac{1}{b}$ 的值。

If $4^a = 25^b = 10$, find the value of $\frac{1}{a}+\frac{1}{b}$.

2001 FG1.4

已知 $\log_x t = 6$，$\log_y t = 10$，$\log_z t = 15$。若 $\log_{xyz} t = d$，求 d 的值。

Suppose $\log_x t = 6$, $\log_y t = 10$ and $\log_z t = 15$. If $\log_{xyz} t = d$, find the value of d.

2003 FG2.2

設 $48^x = 2$，$48^y = 3$。若 $8^{\frac{x+y}{1-x-y}} = b$，求 b 的值。

Given that $48^x = 2$ and $48^y = 3$. If $8^{\frac{x+y}{1-x-y}} = b$, find the value of b.

2004 FG4.3

若 $2^m = 3^n = 36$ 及 $R = \frac{1}{m}+\frac{1}{n}$，求 R 的值。

If $2^m = 3^n = 36$ and $R = \frac{1}{m}+\frac{1}{n}$, find the value of R.

2005 HI9

已知 $60^a = 3$ 及 $60^b = 5$。若 $R = 12^{\frac{1-a-b}{2(1-b)}}$，求 R 的值。

Given that $60^a = 3$, $60^b = 5$. If $R = 12^{\frac{1-a-b}{2(1-b)}}$, find the value of R.

2006 FG4.3

設 $2^x = 7^y = 196$。若 $T = \frac{1}{x}+\frac{1}{y}$，求 T 的值。

Let $2^x = 7^y = 196$. If $T = \frac{1}{x}+\frac{1}{y}$, find the value of T.

2012 HG7

已知 $a^x = b^y = c^z = 30^w$ 及 $\frac{1}{x}+\frac{1}{y}+\frac{1}{z} = \frac{1}{w}$，當中 a、b、c 為正整數 $(a \le b \le c)$ 及 x、y、z、w 為實數。求 $a + b + c$ 的值。

Given that $a^x = b^y = c^z = 30^w$ and $\frac{1}{x}+\frac{1}{y}+\frac{1}{z} = \frac{1}{w}$, where a, b, c are positive integers $(a \le b \le c)$ and x, y, z, w are real numbers, find the value of $a + b + c$.

2015 HI7

設 $x, y, z > 1$、$p > 0$、$\log_x p = 18$、$\log_y p = 21$ 及 $\log_{xyz} p = 9$。求 $\log_z p$ 的值。

Let $x, y, z > 1$, $p > 0$, $\log_x p = 18$, $\log_y p = 21$ and $\log_{xyz} p = 9$.
Find the value of $\log_z p$.

2022 P1Q4

設 x、y 及 z 是非零數。若 $2^x = 3^y = 18^z$，求 $\frac{xz}{5y(x-z)}$ 的值。

Let x, y and z are non-zero numbers. If $2^x = 3^y = 18^z$, find the value of $\frac{xz}{5y(x-z)}$.

2023 HI12

已知 p 及 q 為正實數。若 $\log_9 p = \log_{15} q = \log_{25}(3p+2q)$，求 $\frac{p}{q}$ 的值。

Given that p and q are positive numbers. If $\log_9 p = \log_{15} q = \log_{25}(3p+2q)$, find the value of $\frac{p}{q}$.

Answers

1999 FG1.4 1	2001 HI1 2	2001 FG1.4 3	2003 FG2.2 6	2004 FG4.3 $\frac{1}{2}$
2005 HI9 2	2006 FG4.3 $\frac{1}{2}$	2012 HG7 10	2015 HI7 126	2022 P1Q4 $\frac{1}{10}$
2023 HI12 $\frac{1}{3}$				