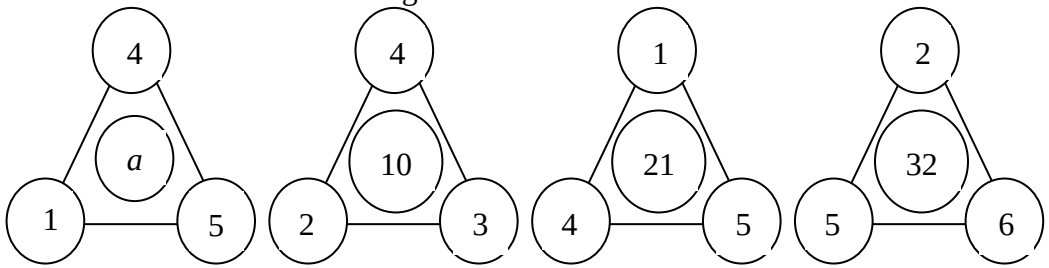
1982 FI3.1

下圖中求 a 的值。

Find the value of a in the figure.



1982 FI3.3

在以下數列中求 c 的值。

Find the value of c from the sequence: $\frac{3}{12}, \frac{7}{34}, \frac{c}{56}, \frac{15}{78}$.

1982 FG9.1

在以下數列中求 A 的值。

Find the value of A from the sequence: 0, 3, 8, A, 24, 35, ⋯

1985 FI2.1

在以下數列中，求 a 的值：1, 8, 27, 64, a, 216, ⋯ .

Find a in the following sequence: 1, 8, 27, 64, a, 216, ⋯ .

1995 HI1

求 1234567654321 的平方根。

Find the square root of 1234567654321.

1997 FI2.1

考慮：$\frac{1^2}{1}=1$，$\frac{1^2+2^2}{1+2}=\frac{5}{3}$，$\frac{1^2+2^2+3^2}{1+2+3}=\frac{7}{3}$，$\frac{1^2+2^2+3^2+4^2}{1+2+3+4}=3$，

求 a 的值使得 $\frac{1^2+2^2+\cdots+a^2}{1+2+\cdots+a}=\frac{25}{3}$。

By considering: $\frac{1^2}{1}=1$, $\frac{1^2+2^2}{1+2}=\frac{5}{3}$, $\frac{1^2+2^2+3^2}{1+2+3}=\frac{7}{3}$, $\frac{1^2+2^2+3^2+4^2}{1+2+3+4}=3$,

find the value of a such that $\frac{1^2+2^2+\cdots+a^2}{1+2+\cdots+a}=\frac{25}{3}$.

2000 FI4.3

已知兩個 12 位數 1111…11 和 9999…99 的乘積中有 R 個數字是奇數，

求 R 的值。

Given that there are R odd numbers in the digits of the product of the two 12-digit numbers 1111…11 and 9999…99, find the value of R .

2004 FI4.4

已知 $241\times462+214=d^2$，求 d 的正數值。

Given that $241\times462+214=d^2$, find the positive value of d .

2006 FI4.3

如圖一，八個正數排成一列，從第三個數開始，每個數都等於前面兩個數的乘積。已知第五個是 $\frac{1}{2}$，而第八個數是 $\frac{1}{16}$。若第一個是 s，求 s 的值。

In Figure 1, there are eight positive numbers in series. Starting from the 3rd number, each number is the product of the previous two numbers. Given that the 5th number is $\frac{1}{2}$ and the 8th number is $\frac{1}{16}$.

If the first number is s, find the value of s .

s				$\frac{1}{2}$			$\frac{1}{16}$

2015 FI1.2

若 β 為乘積 $\underbrace{11111\cdots11}_{10個1}\times\underbrace{99999\cdots99}_{10個9}$ 所有數位的數字之和，求 β 的值。

If β is the sum of all digits of the product $\underbrace{11111\cdots11}_{10\ 1's}\times\underbrace{99999\cdots99}_{10\ 9's}$,

determine the value of β .

Answers

1982 FI3.1 9	1982 FI3.3 11	1982 FG9.1 15	1985 FI2.1 125	1995 HI1 1111111
1997 FI2.1 12	2000 FI4.4 12	2004 FI4.4 334	2006 FI4.3 $\frac{1}{\sqrt{2}}$	2015 FI1.3 90