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Vol. II 428

Now we have men ^{which} having stolen ^{was} strong silk of a storehouse, and we 各足匹; 人但不今
know not how much be that stolen, 幾七人得聞知有
But we hear ~~them~~ ^{them} dividing ~~the~~ 何? 匹得六草所人
strong silk amidst the grass: 問七匹, 中失盜
if each man receiveth six 匹, 人匹, 盈分幾
there be a surplus of six 匹; 續不六續, 何庫
if each man receiveth seven 匹, 絹,
there be a ^{deficit} ~~insufficiency~~ ^{much} of seven 匹.
We ask: how be each of ~~the number of~~ men and strong silk?

(the number of)

(the length of)

I have taken 各幾何 as appeared in B & C.

A & D have 得幾何.

絹: 絹, 經也, 其絲經厚而疏也。(經, 同堅)

kūn3 / juàn

絹 B strong; its silk strong and thick, ~~yet~~ cord sparse.

不足: deficit; lt. insufficiency

Suppose the length of strong silk is L , and that there are n men,
with surplus S if each man ~~takes~~ receives length A ,
and deficit D if each man receives length B .

$$An + S = L$$

$$Bn - D = L$$

or

$$An - L = -S$$

$$Bn - L = +D$$

which solves to give

$$L = \frac{\begin{vmatrix} A & -S \\ B & D \end{vmatrix}}{B-A} = \frac{AD+BS}{B-A}$$

$$n = \frac{\begin{vmatrix} S & -1 \\ D & -1 \end{vmatrix}}{B-A} = \frac{S+D}{B-A}$$

$$\left(\begin{array}{l} \text{where} \\ A = 6 \text{ 匹}, S = 6 \text{ 匹} \\ B = 7 \text{ 匹}, D = 7 \text{ 匹} \end{array} \right)$$

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孫子's method ^{as} given only works because $B - A = 1匹$.

Version B has no
F in 并下.

并之。七 七 放 匹 術 絹 答
下 所 匹 匹 右 放 曰：八 曰：
盈得，於 於 下；右 先 十 賊
不 并 左 左 後 上，置 四 一
足，之，下。上，置 盈 人 匹。十
為 為 維 不 人 六 得 三
人。絹。乘 足 得 匹 六 人

Answer saith: the robbers be thirteen men;
the strong silk eighty-four 匹.

Method saith: first put down each man receiving six 匹 on the top right,
and the surplus, six 匹, on the bottom right; and afterwards put down
~~each~~ each man ~~receiving~~ receiving seven 匹 on the top left,
and the ~~insufficiency~~ ^{deficit}, seven 匹, on the bottom left. $\begin{pmatrix} B & A \\ D & S \end{pmatrix}$

維：腸也，繫也 corner, link

維乘之。所得并之 effectively is the determinant $\begin{vmatrix} A & -S \\ B & D \end{vmatrix} = AD + BS$

維乘：in linkage, multiply them; or in corners, multiply them

In linkage multiply ~~to~~ them; of that detached: combine them, to make
the length of strong silk.

Combine
~~the~~ the surplus and ~~the~~ insufficiency below, to make the
number of men.

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END Volume II