20191115 shuen-iii-15.pdf

A66 B161(156) C52259(3.15) D78 Vol: III ¶15

今有三人共車,二車空;二人共車,九人步。問人與車各幾何。

答曰:一十五車;三十九人。

Now there be three people sharing ~~[scribble]~~ a chariot, and the chariots go empty; but two people sharing a chariot; and nine people go on foot. We ask: how much be each of people and chariots?

Answer saith: fifteen chariots; thirty-nine people.

For p people and c chariots:

$$\begin{cases} p = 3(c-2) \\ p = 2c+9 \end{cases}$$

$$0 = c - 3\times2 - 9$$

$$c = 3\times2+9 = 15$$

$$p = 2\times15+9 = 39.$$

術曰。置二車,以三乘之,得六。加步者九人,得車一十五。欲知人者,以二乘車,加九人,即得。

Method saith: put down the two chariots. Multiplying it by three resulteth in six.

置二車: A, B & D ed. have 置二人.

But if you look at the 3x2 term in $c=3\times2+9$, the 2 arises from the 2 empty chariots, not the 2 people per chariot. If one instead uses dimensional p and c, we have

$$p = \frac{3人}{車}(c - 2車)$$

$$p = \frac{2人}{車}(c) + 9人$$

and ~~[scribble]~~ such a mistake may be avoided.

Adding ~~[scribble]~~ those on foot, the nine people, resulteth in the number of chariots, fifteen. Those wishing to know the number of people: multiplying ~~[scribble]~~ the number of chariots by two, and adding the nine people, we are done.

D ed. has 加九十 for 加九人.

END III 15