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Vol. II 卷20

Now we have area, thirty-five thousand 步. We ask: be this a circle of circumference how much?

Answer saith: six hundred and forty-eight 步 and ninety-six one thousand, two hundred and ninety-sixths of a 步.

$$A = \frac{C^2}{4\pi}, \quad C = \sqrt{4\pi A} \simeq \sqrt{12A} = 648\frac{96}{1296}\text{步}$$

六步答步。今分一曰：問有步千六為積，之二百圓三萬九百四幾，十九十何？五十六。十八千

Method saith: put down the area, thirty-five thousand 步. Multiplying it by twelve, resulteth in four hundred and twenty thousand as the dividend.

二以術一曰：萬十置為實。二積三乘之，萬得五四千十步。

Version C has 四十二萬步 for 四十二萬 inches.

The rest of this paragraph extracting the square root of 420000; see 卷19 for a detailed explanation of the algorithm, which I won't be repeating here.

See also shuen-sqrt.py 420000.

次借一算為下法。步之，超一位，至百而止。

Next, borrow one rod, to be the lower divisor.
Step it, jumping over one place, even unto the hundreds, and stop . . .

上商置六百於實之上。副置六萬於實之下，下法之上，名為方法。命上商六百除實。除訖，倍方法。方法一退，下法再退。

For the upper quotient, put down six hundred above the dividend.
Subsidiarily, put down sixty thousand below the dividend, and above the lower divisor; its name be the upright divisor.
Command the upper quotient's six hundred, to divide the dividend.
The division finished,
double the upright divisor.
The upright divisor retreateth once;
the lower divisor retreateth again.

Version A-m has 六百餘於
for 六百於.

復置上商四十，以次前
商。副置四百於方法之
下，下法之上，名為廉法。
方、廉各命上商四十，以
除實。除訖，倍廉法從方
法。方法一退，下法再退。

Resume, putting for the upper quotient forty, to be next after the former quotient digit. Subsidiarily put down ~~any~~ four hundred below the upright divisor, and above the lower divisor; its name be the incompt divisor. The upright and the incompt each command the upper quotient's forty, to divide the dividend. The division finished, double the incompt divisor, which followeth the upright divisor. The upright divisor retreateth once; the lower divisor retreateth again.

Versions A & C missing 四十 after 各命上商.

復置上商八，次前商。副置八於
方法之下，下法之上，名為隅法。
方、廉、隅各命上商八，以除實。除
訖，倍隅法從方法。

Resume, putting for the upper quotient eight, ~~to be~~ next after the former quotient digit. Subsidiarily put down eight below the upright divisor, and above the lower divisor; its name be the honest divisor. The upright, the incompt and the honest each command the upper quotient's eight, to divide the dividend.
The division finished, double the honest divisor, which followeth the upright divisor.

Version C on. has 各命上前
for 各命上商八.

The upper quotient resulteth in six hundred and forty-eight, and the lower divisors result in one thousand, two hundred and ninety-six, with remainder ninety-six.

上商得六百四十八，下法得一千二百九十六，不盡九十六。

Version A:
- missing 得 after 上商
- em. has 一千二百九十七 for 一千二百九十六, both here and below:

This be a circumference of six hundred and forty-eight 步 and ninety-six one thousand, two hundred and ninety-sixths of a 步.

是為方六百四十八步之九十六。

END 卷20