

A34 B155(150) C52166(2.13) D48

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步得又法十又以得百術答問今  
 以三術除二術畝五五曰曰得有  
 畝萬徑之除周法十十先三田圓  
 法步自得之自二步步置十幾田  
 除四乘畝得相百相又周一何周  
 之除得數七乘四乘置三畝三  
 得之一千得十得徑百奇百  
 畝得萬五九步七一步六步  
 數七以百萬除千百半十徑  
 千三步步之五步之一步  
 五乘以以即百半得一百  
 百之畝一得步之一步

B has 又術曰 A 又術 Here  $\pi \approx 3$ , see Vol. I 95.

Now we have a circular field, with circumference three hundred 步, and diameter one hundred 步. We ask: how much field resulteth?

Answer saith: thirty-one 畝 remainder sixty 步

Method saith: First put down the circumference, three hundred 步; halving it, resulteth in one hundred and fifty 步. Also put down the diameter, one hundred 步; halving it, resulteth in fifty 步. These multiplied with each other resulteth in seven thousand, five hundred 步. Dividing it by the 畝 divisor, two hundred and forty 畝, we are done. Also a method: the circumference, multiplied with itself, resulteth in ninety thousand 步. Dividing it by twelve, resulteth in seven thousand five hundred 步. Dividing it by the 畝 divisor, resulteth in the number of 畝.

Also a method: the diameter, multiplied with itself, resulteth in ten thousand. Multiplying it by three, resulteth in thirty thousand 步. Dividing it by four, resulteth in seven thousand five hundred 步. Dividing it by the 畝 divisor, resulteth in the number of 畝.

$$A = \frac{C}{2} \frac{d}{2} = \frac{C^2}{12} = \frac{3d^2}{4}, \text{ with } 1 = \frac{240 \text{ 步}^2}{\text{畝}}$$

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