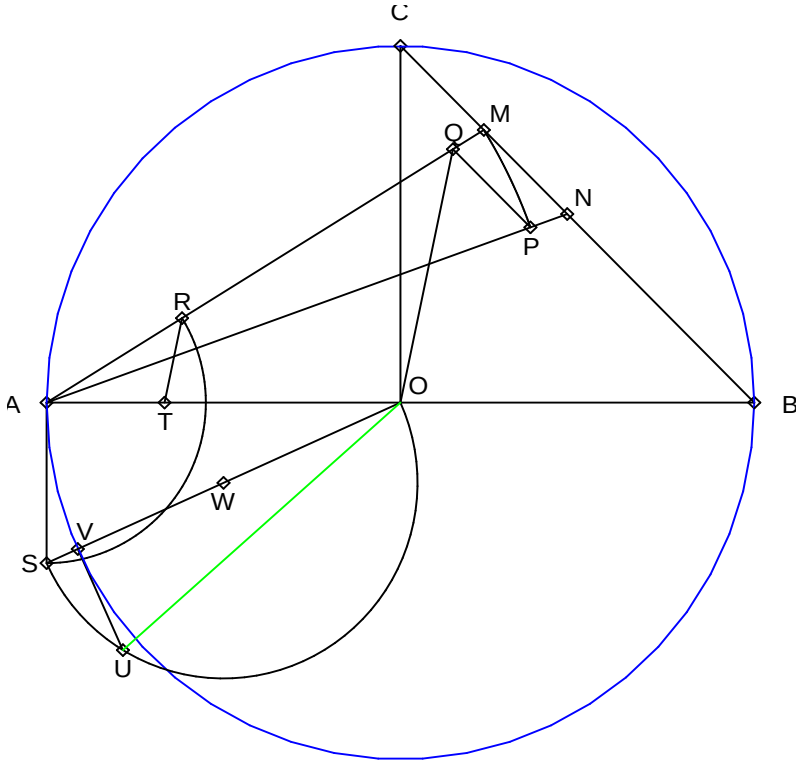
Ramanujan 1914, approximation to Pi

$OB = 1, AT = 1/3, MC = 1/3 = MN, AM = AP, PQ||NM, TR||OQ, AS = AR$
$OW = 1/2OS, \angle OVU = 90°,$ OU approximates $\pi/3$ with 9 digits
$OU = \frac{1}{3}(9^2 + \frac{19^2}{22})^{1/4} = \frac{1}{3}(2143/22)^{1/4} \approx 1.04719755086089.$ $\pi/3 \approx 1.04719755119660.$



Found in S. Ramaujan, "Modular Equations and Approximations to π", Collected Papers (G. H. Hardy, P. V. Seshuaigar and B. M. Wilson, Eds.), Chelsea, New ork, 1922, pp. 23-39.
Reprinted in "Pi: A Source Book" (L. Berggren, J. Borwein and P. Borwein, Eds.) Springer, New York, 1997, pp. 241-257. Construction on pp.253-4.

OU, the square root of OS, has been constructed from the geometric mean of OV=1 and OS (not shown in Ramanujan's original figure 2.)
T is obtained as projection of a point Y along the CO direction. Y is the intersection point of the lines AC and $0X$ where X is the midpoint of the parallel to CO through A.

Put on the web by Wolfdieter Lang, June 2007.