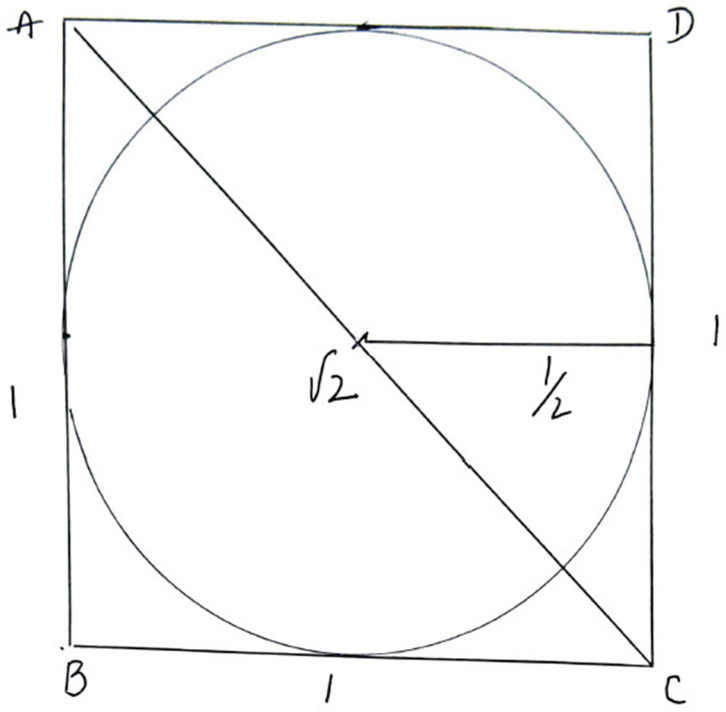
SQUARE & TRIANGLE DERIVE
THE REDDY π (2536th PAPER)



1. Square

   Side length = 1

   Area $= (1)^2 = 1$

2. Triangle ABC

   AB = 1, BC = 1, Hypotenuse $AC = \sqrt{2}$

   Perimeter $= 1 + 1 + \sqrt{2} = 2 + \sqrt{2}$

3. Circle

   Diameter = Side = 1 = d

   Area $= \frac{\pi d^2}{4} = \frac{\pi}{4} \times (1)^2 = \frac{\pi}{4}$

Let the circle area $+ \left(\frac{Perimeter\ of\ triangle}{16} \right)$ side = Area of the Square

$$\frac{\pi}{4} + \left\{ \left(\frac{1+1+\sqrt{2}}{16} \right) \times 1 \right\} = 1$$

$$\frac{4\pi+1+1+\sqrt{2}}{16}=1$$

$$\frac{4\pi+2+\sqrt{2}}{16}=1$$

$$4\pi+2+\sqrt{2}=16$$

$$4\pi=16-2-\sqrt{2}$$

$$4\pi=14-\sqrt{2}$$

$$\pi=\frac{14-\sqrt{2}}{4}=3.14644609$$

Fraction

$$\frac{5135}{1632}=3.146446...$$ (correct upto 6 decimals)

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9-Dec-2025