## Madhova Series:

$$\frac{\pi}{4} = 1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \cdots$$

num. correct digits $= \log_{10}(\text{num terms})$

$$1,000,000 = \log_{10}(n)$$
$$10 \qquad 10$$

$$10^{1000000} = n$$

$$\boxed{\arctan(x) = \frac{x}{1} - \frac{x^3}{3} + \frac{x^5}{5} - \frac{x^7}{7} + \cdots}$$

Formula:
$$\frac{\pi}{4} = 4 \arctan\left(\frac{1}{5}\right) - \arctan\left(\frac{1}{239}\right)$$

## Ferguson's formula:

$$\frac{\pi}{4} = 3 \arctan\left(\frac{1}{4}\right) + \arctan\left(\frac{1}{20}\right) + \arctan\left(\frac{1}{1985}\right)$$