

## The JETS Challenge

Provided by Dave Meredith, Associate Professor,  
Penn State University-Fayette

### Challenge 59 – The Challenge of Finding Pi

---

**Problem:**

The value of Pi can be calculated using the expansion formula:

$$\pi/4 = 1 - 1/3 + 1/5 - 1/7 + 1/9 - \dots$$

Determine the first 20 terms of the formula and give the resulting value of Pi to four significant digits.

---

**Solution:**

$$\pi/4 = 1 - 1/3 + 1/5 - 1/7 + 1/9 - 1/11 + 1/13 - 1/15 + 1/17 - 1/19 + 1/21 - 1/23 + 1/25 - 1/27 + 1/29 - 1/31 + 1/33 - 1/35 + 1/37 - 1/39 + \dots$$

$$\pi/4 = .772905951667$$

$$\pi = 3.09163280667$$