

EXERCISE:

$$4 \left( \underset{\substack{\uparrow \\ i=1}}{1} - \underset{\substack{\uparrow \\ i=2}}{\frac{1}{3}} + \underset{\substack{\uparrow \\ i=3}}{\frac{1}{5}} - \underset{\substack{\uparrow \\ i=4}}{\frac{1}{7}} + \underset{\substack{\uparrow \\ i=5}}{\frac{1}{9}} - \dots \right)$$

Formula:

$$\sum_{i=1}^{\text{big}} (-1)^{i-1} \frac{1}{2i-1}$$

Code:

sum = 0

Do [sum += 4(-1)<sup>n(i-1)</sup> / (2i-1), {i, 1, 10000}]

N[sum]

output: 3.14....

Why does the result look like  $\pi$ ?