

π History

How does your measure of π compare?

Ancient Egyptians	$25/8 = 3.125$	2000 BC
Babylonians	$\sqrt{10} = 3.162$	1800 BC
Egyptians (Rhind Papyrus)	$4 \times (8/9)^2 = 3.16$	1650 BC
Archimedes of Syracuse	Between $223/71$ and $22/7$	250 BC
Ptolemy	3.1416	150 AD
Zu Chongzhi	$355/113$	500 AD
al-Khwarizmi	3.1416	800 AD
al-Kashi	3.14159265358979	1400 AD
Roomen	3.1415926535897932384	1600 AD

You _____

How can you compute π ?

Use a calculator and try this:

$$1 - 1/3 + 1/5$$

So far, not so good. But what do you get if you multiply that result by 4?

Let's get more accurate. Start over but go a little further:

$$1 - 1/3 + 1/5 - 1/7 + 1/9 - 1/11 + 1/13 - 1/15 + 1/17 \dots$$

What pattern do you see? _____

What is your total so far? _____

Multiply that by 4: _____

Extend that pattern as far as you'd like and see how accurate you can get to π .