

## Constants

- i    imaginary unit (also denoted j): defined as  $i^2 = -1$ .    imaginary unit (also denoted j): defined as  $i^2 = -1$ .
- 0    zero: nothing or nil.    zero: nothing or nil.
- $\gamma$     Euler's constant (approximately 0.57721): the limit of

$$\sum_{r=1}^n \frac{1}{r} - \ln n$$

as  $n \rightarrow \infty$ . Euler's constant (approximately 0.57721): the limit of

$$\sum_{r=1}^n \frac{1}{r} - \ln n$$

as  $n \rightarrow \infty$ .

- 1    one: single entity, unity.    one: single entity, unity.
- $\zeta(3)$     Apéry's constant (approximately 1.2020569): a special value of the Riemann zeta function.    Apéry's constant (approximately 1.2020569): a special value of the Riemann zeta function.
- $\lambda$     Conway's constant (approximately 1.30357): the invariant growth rate of all derived strings.    Conway's constant (approximately 1.30357): the invariant growth rate of all derived strings.
- $\sqrt{2}$     Pythagoras' constant (approximately 1.41421): the square root of 2.    Pythagoras' constant (approximately 1.41421): the square root of 2.
- $\phi$     golden ratio (approximately 1.61803): the ratio  $\frac{1+\sqrt{5}}{2}$ .    golden ratio (approximately 1.61803): the ratio  $\frac{1+\sqrt{5}}{2}$ .
- e    Euler's number (approximately 2.71828): base of natural logarithms.    Euler's number (approximately 2.71828): base of natural logarithms.
- $\pi$     pi (approximately 3.14159): the ratio of the length of the circumference of a circle to its diameter.    pi (approximately 3.14159): the ratio of the length of the circumference of a circle to its diameter.