The solutions of the **quadratic equation** $ax^2 + 2bx + c = 0$ are

$$x = \frac{-b \pm \sqrt{b^2 - ac}}{a}.$$

In many applications the "formula"

$$\int_{-\infty}^{\infty} e^{-x^2}\, dx = \sqrt{\pi}$$

is important. In the .tex file, the symbol above before dx adds a thin space.

Let $\vec{u} = (u_1, \ldots, u_n)$ be a point in $\mathbb{R}^n$.

Geometric series If $|x| < 1$ then

$$1 + x + x^2 + \cdots + x^n + \cdots = \sum_{k=0}^{\infty} x^k = \frac{1}{1-x}.$$

This arises in many applications.

Let A be the 2×3 matrix

$$A = \begin{pmatrix} 1 & c & 3 \\ 4 & 3 & 2 \end{pmatrix}$$

There may be letters with accents: Poincaré. TeX (in English) treats Greek letters as mathematical symbols: α, ϵ, Φ. Here is how you type a dollar sign (for US money): \$123.49
Leave a blank line to begin a new line.
For TeX two (or more) blank lines are the same as one blank line. To skip more space, use smallskip

or medskip

or bigskip

or vskip with whatever you want:

On a line, everything after a percent sign is invisible

Bye bye