A sentence with inline mathematics: $y = mx + c$. A second sentence with inline mathematics: $5^2 = 3^2 + 4^2$.

A second paragraph containing display math.

$$y = mx + c$$

See how the paragraph continues after the display.

1. Superscripts a^b and subscripts a_b .

2. Some mathematics: $y = 2 \sin \theta^2$.

3. A paragraph about a larger equation

$$\int_{-\infty}^{+\infty} e^{-x^2}\, dx$$

4. A paragraph about a larger equation

$$\int_{-\infty}^{+\infty} e^{-x^2}\, dx$$

Solve the following recurrence for $n, k \geq 0$:

$$Q_{n,0} = 1 \quad Q_{0,k} = [k = 0];$$
$$Q_{n,k} = Q_{n-1,k} + Q_{n-1,k-1} + \binom{n}{k}, \quad \text{for } n,\ k > 0.$$

AMS matrices.

$$\begin{matrix} a & b & c \\ d & e & f \end{matrix} \quad \begin{pmatrix} a & b & c \\ d & e & f \end{pmatrix} \quad \begin{bmatrix} a & b & c \\ d & e & f \end{bmatrix}$$

Fonts: The matrix $\mathbf{M}$.

bad use $size \neq size \neq \text{size}$
bad use $size \neq size \neq \text{size}$