Some Mathematical Expressions

Two displayed equations. Note that using $$ gives the same result as using the displaymath environment.

$$x^2 + y^2 = z^2$$

$$\sum_{i=1}^{n} a_i$$

The expression $\int_a^b f(x)\,dx$ looks different in-line than it does displayed:

$$\int_a^b f(x)\,dx$$

Note use of "left" and "right" commands in the equation below. They make the following delimiter (in this case parentheses) grow to the appropriate size.

$$\left(\frac{x+y}{z+2}\right) \tag{1}$$

The middle line of this eqnarray is purposely not numbered:

$$\begin{aligned} x &= 17y && (2)\\ y &> a+b+c+d+ \\ &\quad e+f+g && (3) \end{aligned}$$

$$\binom{n}{k-1} + \binom{n}{k} = \binom{n+1}{k} \tag{4}$$

$$\lim_{n\to\infty} \sum_{k=1}^{n} 1/k^2 = \pi^2/6 \tag{5}$$

4×4 matrix

$$\begin{pmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{pmatrix}$$