Without nonumber command

In the case of number equations, what will be the result if `\nonumber` command is not used? Observe the following grouping equation.

$$a = b + c \tag{1}$$
$$\tag{2}$$
$$x = y - z \tag{3}$$
$$\tag{4}$$
$$m = n + o \tag{5}$$

With nonumber command

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam.

$$a = b + c \tag{6}$$

$$x = y - z \tag{7}$$

$$m = n + o \tag{8}$$

Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis.

$$a + b = c \tag{9}$$

$$x^2 + y^2 = z^2 \tag{10}$$

$$e^{i\pi} + 1 = 0 \tag{11}$$

$$\int_0^\infty e^{-x^2} dx = \frac{\sqrt{\pi}}{2} \tag{12}$$