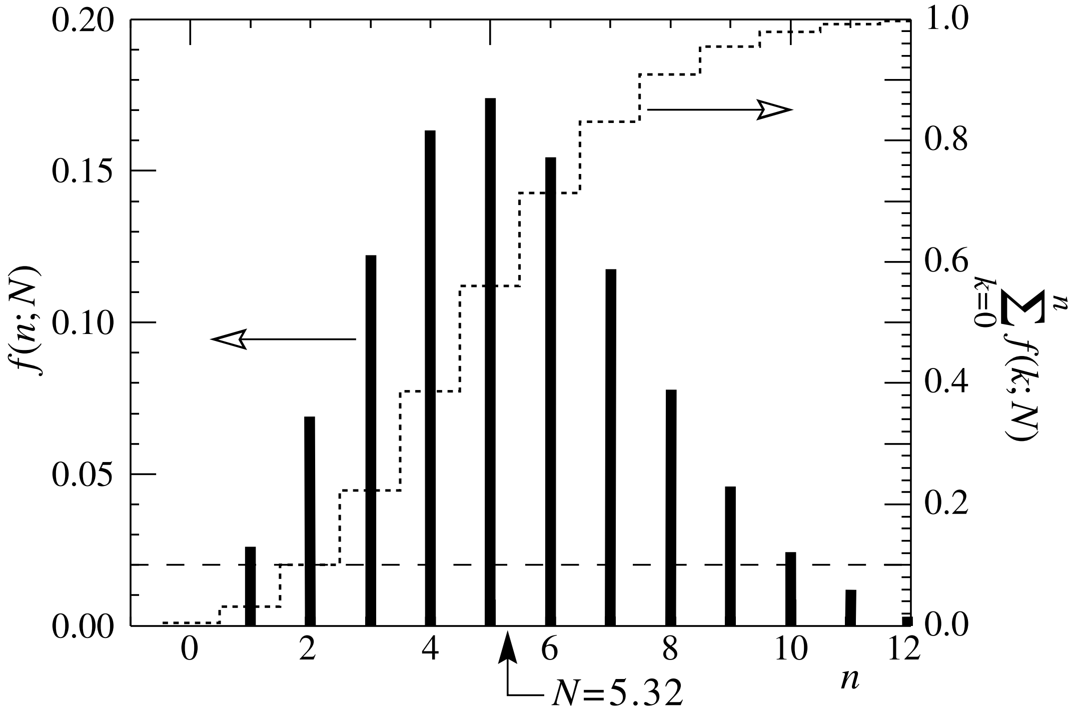

Figure 17.4: Illustration of Eq. (17.32) Poisson probabilities for an assumed mean of N. With an observed count $n_0 = 2$, $N = 5.32$ as shown gives summed probability $\varepsilon = 10\%$. The dotted summed probability curve (scale on right) has been displaced by -0.5 for clarity.

If $n_0 \gg 1$, it may be more convenient to approximate the Poisson as a Gaussian of mean μ and variance $\sigma^2 = \mu$ and use the Gaussian techniques described earlier.

Table 17.3: Poisson upper limits N for n_0 observed events.

n_0	$\varepsilon =$ 10%	$\varepsilon =$ 5%	n_0	$\varepsilon =$ 10%	$\varepsilon =$ 5%
0	2.30	3.00	6	10.53	11.84
1	3.89	4.74	7	11.77	13.15
2	5.32	6.30	8	13.00	14.44
3	6.68	7.75	9	14.21	15.71
4	7.99	9.15	10	15.41	16.96
5	9.27	10.51	11	16.60	18.21