Use of Neave's Normal Tables

Table 2.1a c.d.f. of standard Normal distribution: $\Phi(z) \equiv P(Z \le z \mid Z \sim N(0,1))$

	SUBTRACT			ADD	
z	6	1 2 . . 5. . .9	z	6	1 2 . . 5. . .9
-1.9	0250	3	1.9	9750	3

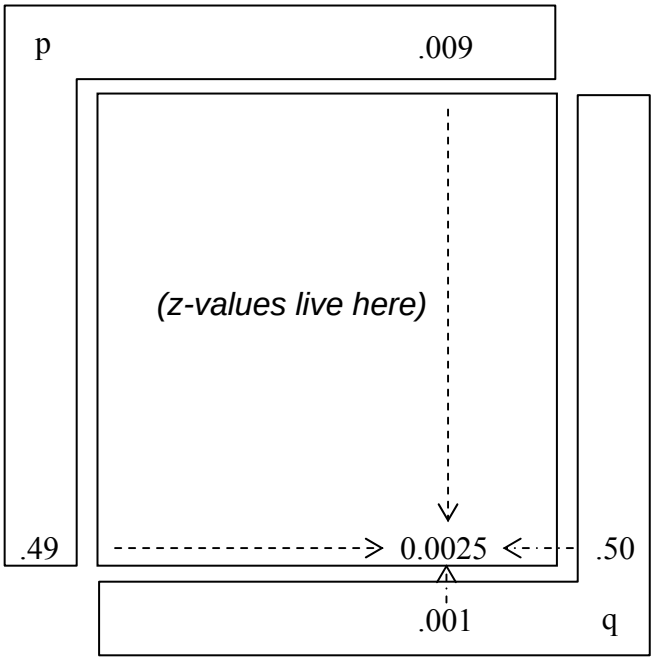
If input -1.965 for z then
$P(Z \le -1.965) = 0.0250 - 0.0003$
$\therefore \Phi(-1.965) = 0.0247$

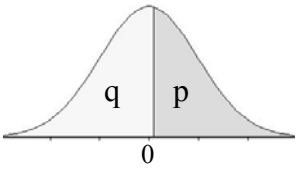
If input 1.965 for z then
$P(Z \le 1.965) = 0.9750 + 0.0003$
$\therefore \Phi(1.965) = 0.9753$

Table 2.3b
Inverse Normal
$z = \Phi^{-1}(q)$

If input a probability p,
output is z such that
$P(Z \ge z) = p$
or, by symmetry,
$P(Z \le -z) = p$

If input .499 for p then
$P(Z \ge 0.0025) = 0.499$
or, by symmetry,
$P(Z \le -0.0025) = 0.499$
$\therefore \Phi^{-1}(0.499) = -0.0025$





Input a probability q.
Output is z such that
$\Phi(z) \equiv P(Z \le z) = q$

If input .501 for q then
$P(Z \le 0.0025) = 0.501$
$\therefore \Phi^{-1}(0.501) = +0.0025$

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