

Double Interpolation

	x_1	x_2
y_1	$f(x_1, y_1)$	$f(x_2, y_1)$
y_2	$f(x_1, y_2)$	$f(x_2, y_2)$

$$f(x, y) = \frac{(x_2 - x)(y_2 - y)}{(x_2 - x_1)(y_2 - y_1)} f(x_1, y_1) + \frac{(x - x_1)(y_2 - y)}{(x_2 - x_1)(y_2 - y_1)} f(x_2, y_1) + \frac{(x_2 - x)(y - y_1)}{(x_2 - x_1)(y_2 - y_1)} f(x_1, y_2) + \frac{(x - x_1)(y - y_1)}{(x_2 - x_1)(y_2 - y_1)} f(x_2, y_2)$$

where $x_1 < x < x_2$ and $y_1 < y < y_2$

For fan tables:

$x = SP$

$y = Q$

$f_1(x, y) = N(\text{rpm})$

$f_2(x, y) = hp$