**Table:** There are $2^{2^n}$ different n-variable Boolean functions.

| No. of variables (n) | Number of different functions (f) |
|---|---|
| 1 | 4 $(0, 1, x, \overline{x})$ |
| 2 | 16 $(0, 1, x_1, x_2, \overline{x_1}, \overline{x_2}, x_1 \oplus x_2$, etc) |
| 3 | 256 $(0, 1, x_1, x_3, \overline{x_1}, \overline{x_2}, x_2 \oplus x_3$, etc) |
| 4 | 65,536 $(0, 1, x_1, x_4, \overline{x_1}, \overline{x_2}, x_3 \oplus x_4$, etc) |
| $\vdots$ | $\vdots$ |
| n | $2^{2^n}$ $(0, 1, x_1, x_n, \overline{x_1}, \overline{x_2}, x_3 \oplus x_n$, etc) |