## Truth Table for the 16 Functions of Two Binary Variables

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Inputs** | Outputs | | | | | | | | | | | | | | | |
| **ZERO** | **AND** | **INHIB**  **X, not Y** | **X** | **Y, not X** | **Y** | **XOR** | **OR** | **NOR** | **COIN** | **NOT Y** | **Y impl. X** | **NOT X** | **X impl. Y** | **NAND** | **ONE** |
| X Y | ***f*F** | ***f*T** | ***f*2** | ***f*3** | ***f*4** | ***f*5** | ***f*6** | ***f*7** | ***f*8** | ***f*9** | ***f*TF** | ***f*TT** | ***f*T2** | ***f*T3** | ***f*T4** | ***f*T5** |
| **F F** | F | F | F | F | F | F | F | F | T | T | T | T | T | T | T | T |
| **F T** | F | F | F | F | T | T | T | T | F | F | F | F | T | T | T | T |
| **T F** | F | F | T | T | F | F | T | T | F | F | T | T | F | F | T | T |
| **T T** | F | T | F | T | F | T | F | T | F | T | F | T | F | T | F | T |
| Symbol |  | • | / |  | / |  | ⊕ | + | ↓ | ⊙ | **'** | ⇒ | **'** | ⇒ | ↑ |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Inputs** | Outputs | | | | | | | | | | | | | | | |
| **ZERO** | **AND** | **INHIB**  **X, not Y** | **X** | **Y, not X** | **Y** | **XOR** | **OR** | **NOR** | **COIN** | **NOT Y** | **Y impl. X** | **NOT X** | **X impl. Y** | **NAND** | **ONE** |
| X Y | ***f*0** | ***f*1** | ***f*2** | ***f*3** | ***f*4** | ***f*5** | ***f*6** | ***f*7** | ***f*8** | ***f*9** | ***f*10** | ***f*11** | ***f*12** | ***f*13** | ***f*14** | ***f*15** |
| **T T** | F | T | F | T | F | T | F | T | F | T | F | T | F | T | F | T |
| **T F** | F | F | T | T | F | F | T | T | F | F | T | T | F | F | T | T |
| **F T** | F | F | F | F | T | T | T | T | F | F | F | F | T | T | T | T |
| **F F** | F | F | F | F | F | F | F | F | T | T | T | T | T | T | T | T |
| Symbol |  | • | / |  | / |  | ⊕ | + | ↓ | ⊙ | **'** | ⇒ | **'** | ⇒ | ↑ |  |