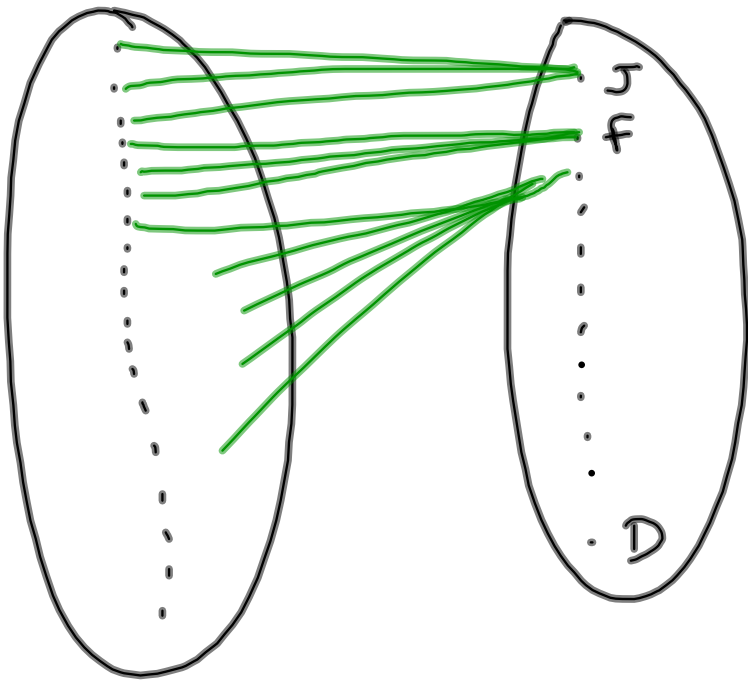


$$\forall x \quad P(x) \rightarrow Q(x)$$



0. - - - - . .

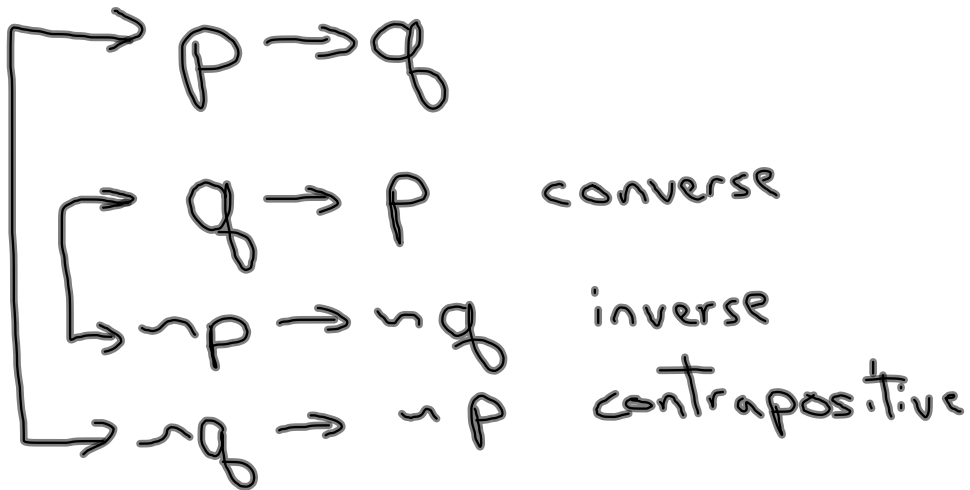
- 1. 0. 1 2 2 3 3 3 . . .
- 2. 0. 3 4 7 0 9 6 . . .
- 3. 0. 1 5 6 7 8 3 2 . . .
- 4. 0. 1 1 1 1 1 1 . . .

construct

$$D = 0. d_1 d_2 d_3 d_4 \dots$$

$$d_i = \begin{cases} 1 & \text{if the } i^{\text{th}} \text{ digit of } f(i) \text{ is not } 1 \\ 2 & \text{otherwise} \end{cases}$$

$$d_i = 22/2 \dots$$



$$\neg(P \rightarrow Q) \equiv \neg(\neg P \vee Q)$$

$$\equiv P \wedge \neg Q$$

P	Q	$P \rightarrow Q$
T	T	T
T	F	F
F	T	T
F	F	T

$$\begin{array}{ccc} x^2 & + & 3x \\ \uparrow & & \uparrow \\ \text{even} & & \text{even} \\ & \swarrow & \searrow \\ & \text{even} & \end{array}$$

if x is even
then $x^2 + 3x$ is even