

# KURT GÖDEL

## CHEAT-SHEET

Anna Frank, Stefan Volz

03.07.2020

### Potentially unfamiliar words

English	German	Example
to concatenate	aneinanderhängen/verketteten	I can concatenate two lists [a,b] and [c,d] to get [a,b,c,d].
to infer	ableiten/folgern	You can infer that $1 + 1$ is a number, because $+$ is an operation on numbers.
inference	Schlussfolgerung	Type inference allows you to omit explicit declarations.
to reason	argumentieren	We can reason about the integers using algebra, because they form a group.
to prove	beweisen	Let's prove the Riemann hypothesis.
excerpt	Auszug	This is an excerpt from the text: ...
congregation	Gemeinde	My local christian congregation meets at church every sunday.
sanatorium	Heilanstalt	He had to spend some time in a sanatorium for mental reasons.
cinaste	Filmliebhaber	She really loves movies - you could say she's a cinaste.
consistency	Widerspruchsfreiheit	
gastrointestinal disease	Magen-Darm Krankheit	

### A small primer on the necessary mathematics

Term	Explanation
injective function	A function $f$ is injective if $f(x) = f(y)$ implies that $x = y$ . $x \mapsto x$ is injective.
image of a function	All values that a function actually takes on. The image of $x \mapsto x^2$ are all nonnegative real numbers.
$S$ -valued sequence	Sequence of elements from $S$ . $(1, -1, 1, -1, \dots)$ is an $\{-1, 1\}$ -valued sequence