

MATEMATISKA INSTITUTIONEN
STOCKHOLMS UNIVERSITET
Avd. Matematik

SJÄLVSTÄNDIGT ARBETE I MATEMATIK

Måndagen den 15 juni kl. 10:00-11:00 presenterar Erik Thormarker sitt arbete "Chaitin's incompleteness theorem" (15 högskolepoäng, grundnivå).

Handledare: Erik Palmgren

Plats: Sal 32, hus 5, Kräftriket

Sammanfattning: In this thesis we look at an incompleteness result by Gregory Chaitin. Roughly Chaitin's result tells us that under certain assumptions on a formal system there exists a constant c such that no statements of the form " $C(n) > c$ ", where $C(n)$ is the Kolmogorov complexity of a natural number n , are provable in that formal system. After Chaitin's result there has been a discussion concerning what the theorem actually implies, we will give a summary of this discussion. We also compare Chaitin's result to Gödel's famous incompleteness theorems and discuss if Chaitin's result can be said to be as strong as Gödel's result. Finally we will look at some developments in recent years with a connection to Chaitin's result.

Alla intresserade är välkomna!