1

Assume that there is an algorithm `bool Halt(p,i)` which can determine whether program `p` will stop given input `i`.

```
void Evil(i) {
if (!Halt(Evil,i)) return;
else while(1);
}
```

If `Halt(Evil,i)` returns `true`, `Evil(i)` will terminate.

Else, `Evil(i)` won't terminate.

Both conditions lead to contradictions.

2

2.1 Addition

	自然数	**负**	**鿏**
自然数	自然数	鿏	鿏
负	鿏	负	鿏
鿏	鿏	鿏	鿏

2.2 Division

下为除数/右为被除数	**自然数**	**负**	**鿏**
自然数	鿏	鿏	鿏
负	鿏	自然数	鿏
鿏	鿏	鿏	鿏

Let $a, b < 0$.

Consider formula $\frac{a/a}{b/b}$.

In abstract analysis, the result will be $\frac{\mathbb{N}}{\mathbb{N}}$ =鿏.

But clearly the result will be a natural number, namely 1.