

Hilbert's
10th Problem

Hw # 5
Problem 4

$$\Sigma = \{0\}$$

$$\Gamma = \{0, \#, b\}$$

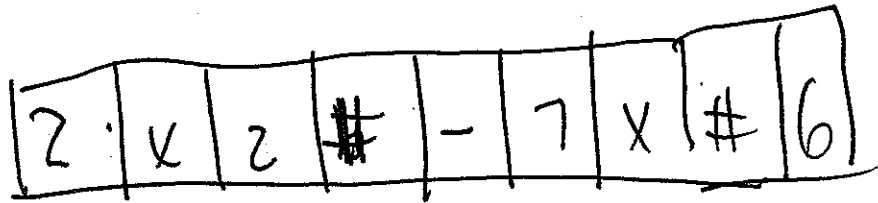
↓
0 0 b 0 0

start

↓
b 0 0 b 0 0

finish

$$2x^2 - 7x + 6 = 0$$



An example input tape representation

3.8(a)

1. if ~~only~~ only X's are left on the tape, then accept (or tape is empty)
2. find a 0 and turn it into an X
If this is not possible, then reject
3. like step, but for 1
4. go to step 1