

(L35) Ex. A1

Suppose  $M_{HE}$  exists.

Construct  $M_H \langle M, x \rangle$

Construct  $M' \langle M, x \rangle$

Run like  $M$ , except:

- put all output on 2nd tape
- Before accepting or rejecting, write HELLO to 1st tape

Run  $M_{HE}$  on  $\langle M', x \rangle$ ;

accept if  $M_{HE}$  accept  
reject otherwise