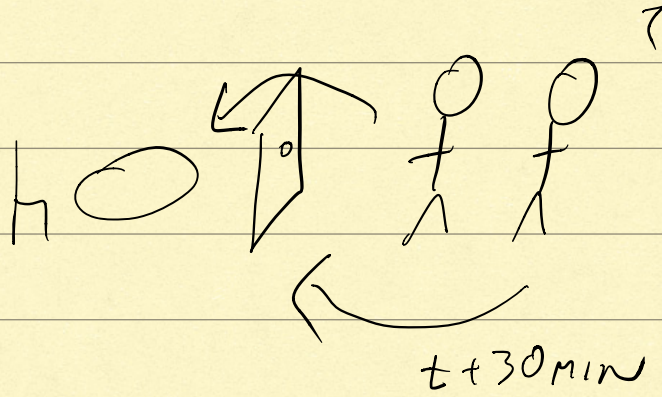
PS 4A



WAIT TIME W

$$E[W] = E[W|A]\,\mathbb{P}(A) + E[W|B]\,\mathbb{P}(B)$$

A, B PARTITION S

OPTION 1:

FIRST MEETING DURATION

$$E[W] = E[W \mid T_1 < 30\text{MIN}]\,\mathbb{P}(T_1 < 30\text{MIN}) + E[W \mid T_1 \geq 30\text{MIN}] \cdot \mathbb{P}(T_1 \geq 30\text{MIN})$$

OPTION 2: K - # OF MEETINGS ENDING IN FIRST 30 MIN

$K \sim$ POISSON

$$E[W] = E[W \mid K \geq 1]\,\mathbb{P}(K \geq 1) + E[W \mid K = 0]\,\mathbb{P}(K = 0)$$