

$T$  - TIME STUDENT B WAITS

$$E[T] = E[T | A] P(A) + E[T | B] P(B)$$

EVENT A: STUDENT DID NOT RUN OVER 30 MIN

EVENT B: STUDENT RAN OVER 30 MIN

0

0

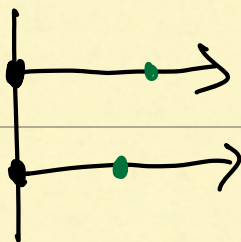
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$(1/e)$

$(30 \text{ MIN}) \cdot \frac{1}{e} \sim \underline{\underline{11 \text{ MIN}}}$

$$E[T | B] = \int t \frac{P(t \& T, > 30 \text{ MIN})}{P(T, > 30 \text{ MIN})} dt$$

B



GENE LOCI

t