

Homework 3

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1. Suppose a planet has m days in a year, and life forms have equal probability of being hatched on any of these days. For a random group of n lifeworms, find the expected proportion of the m possible hatch days that are represented. Find the value when $m = 365$ and $n = 365$ (hint: use indicator variables; the answer is close to $1 - e^{-1}$.)