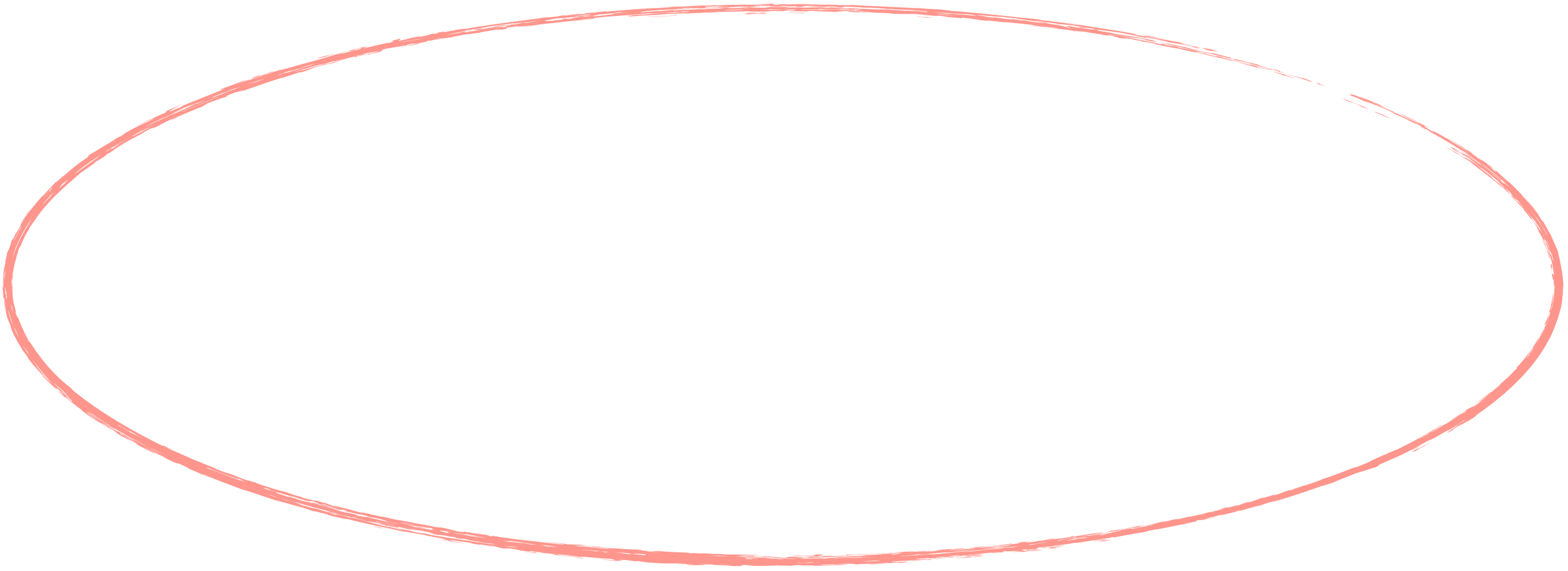
example (cont'd...)


3
2
1
0



discrete random variables: probability mass function

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example (cont'd...)

Toss a coin 3 times: the sample space is $\Omega : \{H,T\} \times \{H,T\} \times \{H,T\}$

Define the random variable: $X =$ the number of heads

What is the probability distribution of X?

Outcome (ω)	HHH	HTH	THH	HHT	HTT	THT	TTH	TTT
$X(\omega)$	3	2			1			0

$$P(X = 3) = \frac{1}{8} \qquad P(X = 1) = \frac{3}{8}$$

$$P(X = 2) = \frac{3}{8} \qquad P(X = 0) = \frac{1}{8}$$

discrete random variables: probability mass function

example (cont'd...)

Toss a coin 3 times: the sample space is Ω : $\{H,T\} \times \{H,T\} \times \{H,T\}$

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