

#### MITx: 6.041x Introduction to Probability - The Science of Uncertainty

<u>Help</u>



- ▶ <u>Unit 0:</u> Overview
- **▶** Entrance Survey
- **▼** Unit 1: **Probability** models and axioms

Lec. 1: Probability models and axioms

Exercises 1 due Jan 26, 2017 20:59 ART

Mathematical background: Sets; sequences, limits, and series: (un)countable sets.

Solved problems

## **Problem Set 1**

Problem Set 1 due Jan 26, 2017 20:59 ART

▶ <u>Unit 2:</u> Conditioning and independence

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# Problem 3 Vertical: Three tosses of a fair coin

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### Problem 3: Three tosses of a fair coin

4/4 points (graded)

You flip a fair coin (i.e., the probability of obtaining Heads is 1/2) three times. Assume that all sequences of coin flip results, of length 3, are equally likely. Determine the probability of each of the following events.

1. **{HHH}**}: 3 Heads

0.125		<b>~</b>
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2. {*HTH*}: the sequence Heads, Tails, Heads

0.125	•
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3. Any sequence with 2 Heads and 1 Tails (in any order):

0.375	<b>~</b>
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4. Any sequence in which the number of Heads is greater than or equal to the number of Tails:

0.5	~
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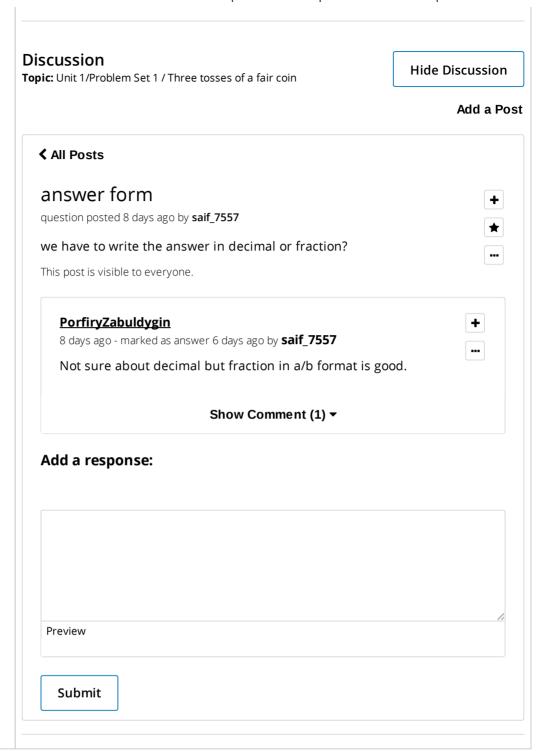
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You have used 2 of 2 attempts

Correct (4/4 points)

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