

CHAPTER 16

- Box model
- Any probability question can be modeled as a box model.

BOX MODEL

- Flip a coin 100 times

100 draws from a box randomly with replacement 1 H and 1 T

- Roll a dice 50 times

50 draws randomly with replacement from the box _____

- Flip a coin 100 times, win 2\$ with a head, loss 1 \$ with a tail
- The net win will be ____ draws randomly with replacement from a box _____
- Roll a dice 50 times, win 5\$ with number 1/ace , lose 1\$ without 1/ace
- The net win ____ draws randomly with replacement from the box _____

BOX MODEL

- 1. Which numbers goes into the box?
- 2. How many of each kind?
- 3. How many draws?

- Roll a dice 150 times, win 2\$ with number >4 , lose 1\$ with <3 , win 0\$ with number $=4$

- The net win will be ____ draws randomly with replacement from the box _____

CH 16 REVIEW QUESTION 7

- A quiz has 25 multiple choice questions. Each question has 5 possible answer, one of which is correct. A correct answer is worth 4 point, but a point is taken off for each incorrect answer.
- A student answers all the questions by guessing at random.
- The score will be like the sum of _____ draws from the box _____.