

## Quiz 2

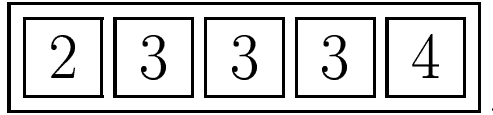
May 13

Your section: \_\_\_\_\_ Print your name: \_\_\_\_\_

Sign your name: \_\_\_\_\_

This is an open book exam. However, you are not allowed to pass any material (such as books, notes, or calculators) to each other. The quiz consists of three problems on pages 2 through 4. Good luck!

**Problem 1.** Two draws will be made at random *without* replacement from the box



- (a) Are the draws independent? Answer with “yes” or “no”, and explain.
- (b) What is the chance of drawing 2 and then 3?
- (c) What is the chance of drawing 2 and then 4?
- (d) What is the chance of drawing 2 twice?

Show all your work for parts (b), (c), and (d). (3+2+2+2 = 9 points)

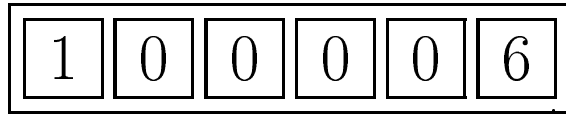
**Problem 2.** A die is rolled *three* times.

- (a) Find the chance of getting three sixes.
- (b) Find the chance of not getting a six.
- (c) Find the conditional chance of getting a total of 17 or more spots, given that the first roll was a six and the second was a five.

In each case, explain briefly. (3+3+3 = 9 points)

**Problem 3.** You can choose among two options:

- (i) You roll a die 50 times; on each roll, if it lands a one or a six you win \$1, if it lands another number nothing happens.
- (ii) You draw 50 times at random with replacement from the box



On each draw, you are paid (in dollars) the number on the ticket.

Which option is better for you? Or are they the same? Explain your answer. (7 points)