

**Quiz 4 (Group) for Statistics 113**  
**Statistics and Society–Fall 1999**  
**Material Covered: Chapters 13,14,15 of notes and text**  
**For: 20th October**

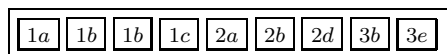
Name 1 (please print): \_\_\_\_\_  
last first

Name 2 (please print): \_\_\_\_\_  
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Name 3 (please print): \_\_\_\_\_  
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Name 4 (please print): \_\_\_\_\_  
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Tickets are sampled at random, with replacement, from the following box model.



There are, for instance, four tickets with a “1”, including “1a”, “1b”, “1b” and “1c”.

1. The chance that one ticket, drawn from this box model, has an “a” is (circle one)  $\frac{2}{9} / \frac{3}{9} / \frac{4}{9} / \frac{5}{9} / \frac{6}{9}$ .
2. The chance that one ticket, drawn from this box model, has a “1” or an “a” is (circle one)  $\frac{2}{9} / \frac{3}{9} / \frac{4}{9} / \frac{5}{9} / \frac{6}{9}$ .
3. The chance that one ticket, drawn from this box model, has a “1”, knowing that this ticket has an “a”, is (circle closest one) **20%** / 30% / 40% / 50% / 60%.
4. The event, “choosing one ticket with a 2”, depends on the event, “choosing one ticket with a b”, because (circle one)
  - (a)  $\frac{1}{9} \neq \frac{2}{9} \times \frac{4}{9}$
  - (b)  $\frac{1}{9} \neq \frac{3}{9} \times \frac{4}{9}$
  - (c)  $\frac{1}{9} \neq \frac{4}{9} \times \frac{4}{9}$
  - (d)  $\frac{1}{9} \neq \frac{5}{9} \times \frac{4}{9}$
  - (e)  $\frac{1}{9} \neq \frac{6}{9} \times \frac{4}{9}$
5. In five draws from this box model, the chance of choosing four “3”s, is (circle one)
  - (a)  $\frac{5!}{4!1!}(2/9)^4(7/9)^1$
  - (b)  $\frac{5!}{3!2!}(2/9)^4(7/9)^1$
  - (c)  $\frac{5!}{4!1!}(4/9)^2(3/9)^1$
  - (d)  $\frac{5!}{4!1!}(2/9)^3(7/9)^1$
  - (e)  $\frac{5!}{4!1!}(2/9)^4(7/9)^3$
6. The addition rule says “chance of event A or B” equals (circle one)
  - (a) “chance of event A”  $\times$  “chance of event B”
  - (b) “event A”  $\times$  “chance of event B”  $-$  “chance of event A and B”
  - (c) “chance of event A”  $+$  “chance of event B”  $\times$  “chance of event A and B”
  - (d) “chance of event A”  $+$  “chance of event B”  $-$  “chance of event A and B”

1.  $\frac{2}{9}$

2.  $\frac{5}{9}$

3. 50%

4. (b)

5. (a)

6. (d)