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): _____.
last first

Name 3 (please print): _____.
last first

Name 4 (please print): _____.
last first

Tickets are sampled at random, with replacement, from the following box model.

$1a$	$1b$	$1b$	$1c$	$2a$	$2b$	$2d$	$3b$	$3e$

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) $\mathbf{\frac{2}{9}}$ / $\mathbf{\frac{3}{9}}$ / $\mathbf{\frac{4}{9}}$ / $\mathbf{\frac{5}{9}}$ / $\mathbf{\frac{6}{9}}$.

2. The chance that one ticket, drawn from this box model, has a "1" or an "a" is (circle one) $\mathbf{\frac{2}{9}}$ / $\mathbf{\frac{3}{9}}$ / $\mathbf{\frac{4}{9}}$ / $\mathbf{\frac{5}{9}}$ / $\mathbf{\frac{6}{9}}$.

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" × "chance of event B"
   (b) "event A" × "chance of event B" − "chance of event A and B"
   (c) "chance of event A" + "chance of event B" × "chance of event A and B"
   (d) "chance of event A" + "chance of event B" − "chance of event A and B"

1. $\mathbf{\frac{2}{9}}$
2. $\mathbf{\frac{5}{9}}$
3. $\mathbf{50\%}$
4. (b)
5. (a)
6. (d)