

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

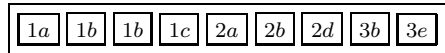
Name 1 (please print): _____
last first

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.



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)