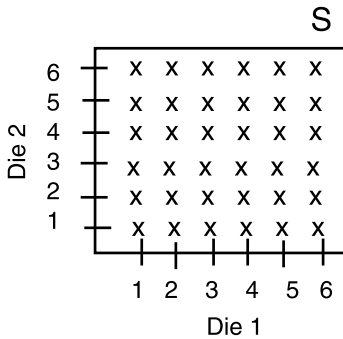


Quiz 5 (Individual) for Statistics 113
Statistics and Society–Spring 2000
Material Covered: Chapter 18 of notes and text
For: Friday, 31st March

Name (please print): _____
last first

Consider the Venn diagram of “two rolls of a fair die”, given below.



- (a) [1] The chance the sum of the dice is 7 (circle closest one) $\frac{5}{36}$ / $\frac{6}{36}$ / $\frac{7}{36}$ / $\frac{8}{36}$ / $\frac{9}{36}$.
- (b) [1] If you actually did roll a pair of dice, the sum of the dice would mostly likely be (circle one) 7 / 8 / 9 / 10 / 11 .
- (c) [2] We wish to simulate the probability distribution for the sum of a pair of dice by using a random numbers table to draw tickets from a box model. Which of the following tables would be used to best perform this simulation? (Circle one)

(i) Table A

ticket	01,02	03,04	05,06	07,08	09,10	11,....,26	27,28	29,30	31,32	33,34	35,36
represents sum	2	3	4	5	6	7	8	9	10	11	12

(ii) Table B

ticket	01	02,03	04,05,06	07,....,10	11,....,15	16,....,21	22,....,26	27,....,30	31,32,33	34,35	36
represents sum	2	3	4	5	6	7	8	9	10	11	12

(iii) Table C

ticket	01	02,03	04,05,06	07,....,10	11,....,16	17,....,20	21,....,26	27,....,30	31,32,33	34,35	36
represents sum	2	3	4	5	6	7	8	9	10	11	12

(iv) Table D

ticket	01	02,03	04,05,06	07,....,12	13,....,15	16,....,21	22,....,24	25,....,30	31,32,33	34,35	36
represents sum	2	3	4	5	6	7	8	9	10	11	12

- (d) [1] **True** / **False** As the number of draws increases, the histogram of the box model of the sum of a pair of dice becomes more and more normal shaped.
- (e) [1] **True** / **False** As the number of draws increases, the histogram of the box model of the product of a pair of dice becomes more and more normal shaped.

(a) [1] $\frac{6}{36}$

(b) [1] **7**

(c) [2] **(ii)**

(d) [1] **False** (Becomes more and more like the *actual* distribution, which is triangular.)

(e) [1] **False** (Applies to “sum”, not “product”.)