

Probability Tables

- While it is unlikely to work with invalid probability tables, it is important to know what makes them valid. Thus, the rules for a valid probability table are:
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Practice

1. For each of the following tables, determine whether or not it is a valid probability distribution table and what rules it breaks if it is invalid. (Hint: remember the rules for probability distribution tables.)

Table A:

X	2	4	6	8	10	12
Prob.	0.09	0.45	0.2	0.06	0.11	0.21

Table B:

X	0.25	0.5	0.75	1
Prob.	0.07	.51	0.32	0.1

Table C:

X	0.5	1	1.5	2	2.5	3	3.5	4
Prob.	1.09	2.3	0.9	0.71	1.5	0.89	1.35	1.26

Table D:

X	5	10	15
Prob.	0.35	0.61	0.04

2. A group of friends are playing a betting game based off of the sum of rolling three-sided dice with a two-sided dice. Barabra wants to know the probabilities of each sum so she can bet with less risk. Create a probability table, then answer the questions below.

(A) What is the probability of more than 2 but at most 4?

(B) What is the probability of at least 3?

(C) What is the probability of less than 5?

(D) Find the mean, variance, and standard deviation of the probability table.

3. Find the missing value of the table below, then answer the questions below.

X	1	2	3	4	5	6	7
Prob.	0.21	0.08	0.05	0.33	?	0.03	0.16

(A) What is the probability of at most 2 or more than 5?

(B) What is the probability of more than 3?

(C) What is the probability of 7?

(D) Find the mean, variance, and standard deviation of the probability table.