

- e. Exact foot lengths of humans
- f. Shoe sizes (such as 8 or $8\frac{1}{2}$) of humans
- 6. a. Eye colors of humans on commercial aircraft flights
- b. Weights of humans on commercial aircraft flights
- c. Numbers of passengers on commercial aircraft flights
- d. Numbers of randomly generated digits before getting the digit 3
- e. Political party affiliations of adults in the United States
- f. Exact costs of presidential campaigns

Identifying Probability Distributions. In Exercises 7–14, determine whether a probability distribution is given. If a probability distribution is given, find its mean and standard deviation. If a probability distribution is not given, identify the requirements that are not satisfied.

7. Genetic Disorder Four males with an X-linked genetic disorder have one child each. The random variable x is the number of children among the four who inherit the X-linked genetic disorder.

x	$P(x)$
0	0.0625
1	0.2500
2	0.3750
3	0.2500
4	0.0625

8. Male Color Blindness When conducting research on color blindness in males, a researcher forms random groups with five males in each group. The random variable x is the number of males in the group who have a form of color blindness (based on data from the National Institutes of Health).

x	$P(x)$
0	0.659
1	0.287
2	0.050
3	0.004
4	0.001
5	0+

9. Pickup Line Ted is not particularly creative. He uses this pickup line “If I could rearrange the alphabet, I’d put U and I together.” The random variable x is the number of girls Ted approaches before encountering one who reacts positively.

x	$P(x)$
1	0.001
2	0.020
3	0.105
4	0.233
5	0.242

10. Fun Ways to Flirt In a Microsoft Instant Messaging survey, respondents were asked to choose the most fun way to flirt, and the accompanying table is based on the results.

	$P(x)$
E-mail	0.06
In person	0.55
Instant message	0.24
Text message	0.15

11. Fun Ways to Flirt A sociologist randomly selects single adults for different groups of four, and the random variable x is the number in the group who say that the most fun way to flirt is in person (based on a Microsoft Instant Messaging survey).

x	$P(x)$
0	0.041
1	0.200
2	0.367
3	0.299
4	0.092