

29. The pmf of the amount of memory X (GB) in a purchased flash drive was given as

x	1	2	4	8	16
$p(x)$.05	.10	.35	.40	.10

Compute the following:

- $E(X)$
- $V(X)$ directly from the definition
- The standard deviation of X
- $V(X)$ using the shortcut formula

47. The article “**Should You Report That Fender-Bender?**” (*Consumer Report*, Sept. 2013: **15**) reported that 7 in 10 auto accidents involve a single vehicle (the article recommended always reporting to the insurance company an accident involving multiple vehicles). Suppose 15 accidents are randomly selected. Use Appendix Table A.1 to answer each of the following questions.

- What is the probability that at most 4 involve a single vehicle?
- What is the probability that exactly 4 involve a single vehicle?
- What is the probability that exactly 6 involve multiple vehicles?
- What is the probability that between 2 and 4, inclusive, involve a single vehicle?
- What is the probability that at least 2 involve a single vehicle?
- What is the probability that exactly 4 involve a single vehicle and the other 11 involve multiple vehicles?

55. Twenty percent of all telephones of a certain type are submitted for service while under warranty. Of these, 60% can be repaired, whereas the other 40% must be replaced with new units. If a company purchased ten of these telephones, what is the probability that exactly two will end up being replaced under warranty?