Problem 5. An airline tracks data on its flight arrivals. Over the past six months, 65 flights on one route arrived early, 273 arrived on time, 218 were late, and 44 were cancelled

* a. What is the probability that a flight is early? On time? Late? Cancelled?
* b. Are these outcomes mutually exclusive?
* c. What is the probability that a flight is either early or on time?

Problem 6. A survey of 100 MBA students found that 60 owned mutual funds, 40 owned stocks, and 20 owned both.

* a. What is the probability that a student owns a stock? A mutual fund?
* b. What is the probability that a student owns neither stocks nor mutual funds?
* c. What is the probability that a student owns either a stock or a mutual fund?

Problem 8. The weekly demand of a slow-moving product has the probability mass function:

| Demand, *x* |  Probability, *f*(*x*) |
| --- | --- |
| 0 |  0.1 |
| 1 |  0.4 |
| 2 |  0.3 |
| 3 |  0.2 |
| 4 or more |  0   |

Find the expected value, variance, and standard deviation of weekly demand.