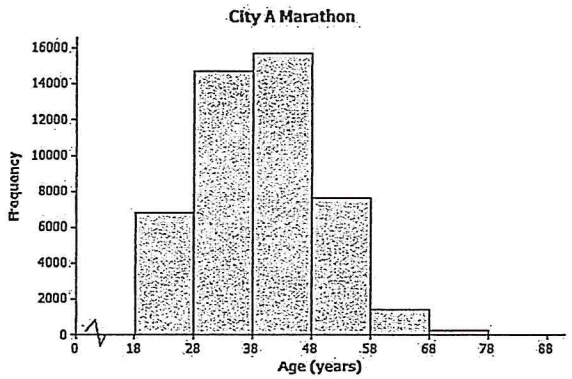
e. How close were your answers (a)–(c) to the actual values?

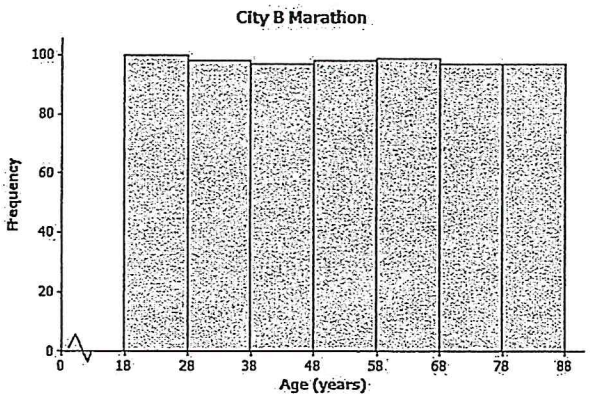
2. A large city, which we will call City A, holds a marathon. Suppose that the ages of the participants in the marathon that took place in City A were summarized in the histogram below.



a. Make an estimate of the mean age of the participants in the City A marathon.

b. Make an *estimate* of the standard deviation of the ages of the participants in the City A marathon.

A smaller city, City B, also held a marathon. However, City B restricts the number of people of each age category who can take part to 100. The ages of the participants for one race are summarized in the histogram below. The ages of the participants are summarized in the histogram below.



c. Approximately what was the mean age of the participants in the City B marathon? Approximately what was the standard deviation of the ages?

d. Explain why the standard deviation of the ages in the City B marathon is greater than the standard deviation of the ages for the City A marathon.