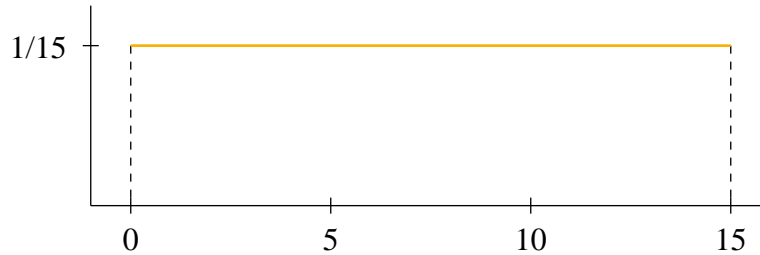


**Homework Solutions**  
**Chapter 7 – Page 481**

**Exercise 64**

(a)



- (b) On the average, a student will wait 7.5 minutes. The distribution is symmetric, so the mean must be in the middle.
- (c) The area under the graph from 10 to 15 is a rectangle with a base of 5 and a height of  $\frac{1}{15}$ , so its area is  $\frac{5}{15} = \frac{1}{3}$ . Or, because the distribution is uniform, you can use the fact that the interval from 10 to 15 is  $\frac{1}{3}$  of the interval from 0 to 15. (*That shortcut works only for uniform distributions.*)
- (d) (i) The direction of extreme is to the right, because alternative hypothesis says that the mean is *greater* than 7.5.
- (ii) The  $p$ -value of 13 is the probability of getting a value 13 or greater if the original distribution is correct. That probability is  $\frac{2}{15} = 0.1333$ .
- (iii) The  $p$ -value of 0.1333 is greater than the significance level of 0.10, so we should accept  $H_0$  (that the mean waiting time is 7.5 minutes).