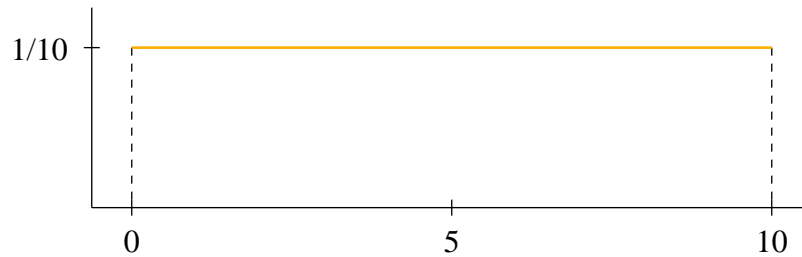


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Exercise 65

(a)



- (b) The mean time is 5 minutes. The distribution is symmetric, so the mean must be in the middle.
- (c) “No more than 3” means from 0 to 3 in this context. That probability is represented by the area under the graph from 0 to 3. That area is $\frac{3}{10}$.
- (d) (i) The direction of extreme is to the right, because alternative hypothesis says that the mean is *greater* than 5.
- (ii) The p -value of 9 is the probability of getting a value 9 or greater, which means from 9 to 10, if the original distribution is correct. That probability is $\frac{1}{10} = 0.10$.
- (iii) The p -value of 0.10 is less than the significance level of 0.15, so we should reject H_0 and conclude that the buses are more than 5 minutes late on the average.