

44.395

Grouped Frequency Calculations

Below is information regarding the length of conviction (in years) for a sample of 125 violent offenders. Use this information to answer the following questions:

Class Interval	Midpoint (M)	Frequency (f)	Cumulative Frequency (cf)	Percent (%)	Cumulative Percent (C%)
66-68		11		8.8	
63-65		14		11.2	
60-62		23		18.4	
57-59		9		7.2	
54-56		17		13.6	
51-53		11		8.8	
48-50		6		4.8	
45-47		11		8.8	
42-44		14		11.2	
39-41		9		7.2	
Totals		125		100	

1. What is the average sentence length for this sample of offenders? Recall that the mean for a grouped frequency distribution is calculated using the following equation:

$$\bar{x}_g = \frac{\sum fM}{N}$$

2. What is the sentence length associated with the 64th percentile? Interpret this value.

3. If you know that a given offender was sentenced to 58.5 years, where does this sentence rank with respect to the other inmates in the sample. That is, calculate the percentile rank associated with this sentence length.

Simple Frequency Calculations

Below is a sample of 12 of the 125 inmates listed above. These data list the number of previous convictions each individual had prior to their present incarceration. Use these data to answer the following questions.

5 7 9 9 10 11 13 14 17 19 21 24

1. What is the average number of previous convictions for this sample of offenders?
2. What is the median number of previous convictions for this sample of offenders?
3. Is there evidence that the above distribution is skewed? If so in what direction. If not, why not.
4. Read the following passage and identify the modal word (or words):

As the Red Sox try to win consecutive World Series titles for the first time since 1916, the year [Walter Cronkite](#) was born, Beckett's status looms over them. Without a healthy Beckett, the Red Sox will have a much tougher time repeating as World Series winners. He has been a difference maker in the postseason for two champions: the 2007 Red Sox and the 2003 [Florida Marlins](#). Maybe Manager Terry Francona is already fatigued by the attention being given to Beckett's uncertain situation because he essentially designated Lester as the new Beckett on Monday. Francona was steering the focus away from what the Red Sox may not have (the best of Beckett) to what they do have (the best of the talented and still improving Lester). "There's no getting around what Beckett has done in postseason play — not only for us, but with the Marlins," Francona said in Boston. "I think we're all looking forward to Jon Lester maybe making his time. He's been so good the last four months of the year, this is an exciting time." Lester is a cancer survivor. Francona knows how courageous and resilient he is. By saying what he did, Francona reminded the Red Sox that, with or without a forceful Beckett, they must keep grinding toward their ultimate goal. Lester, 24, was 16-6 with a 3.21 earned run average in his first full season and threw a no-hitter against Kansas City on May 19. In September, he went 4-1 with a 2.14 E.R.A. and was named the American League pitcher of the month, becoming the first Red Sox pitcher to win the award more than once in a season since [Pedro Martínez](#) received it three times in 1999.

5. Just a joke...disregard question number 4. Please let me know if you have any questions. See you Tuesday! Enjoy the weekend....JS