Extra Problems

These extra questions are here to give you more practice if you feel you need it. No new concepts are introduced on this page. If you've "got it", go ahead and move on to the next page. If you'd like a little more practice, work through the questions below.

Scenario: Depression

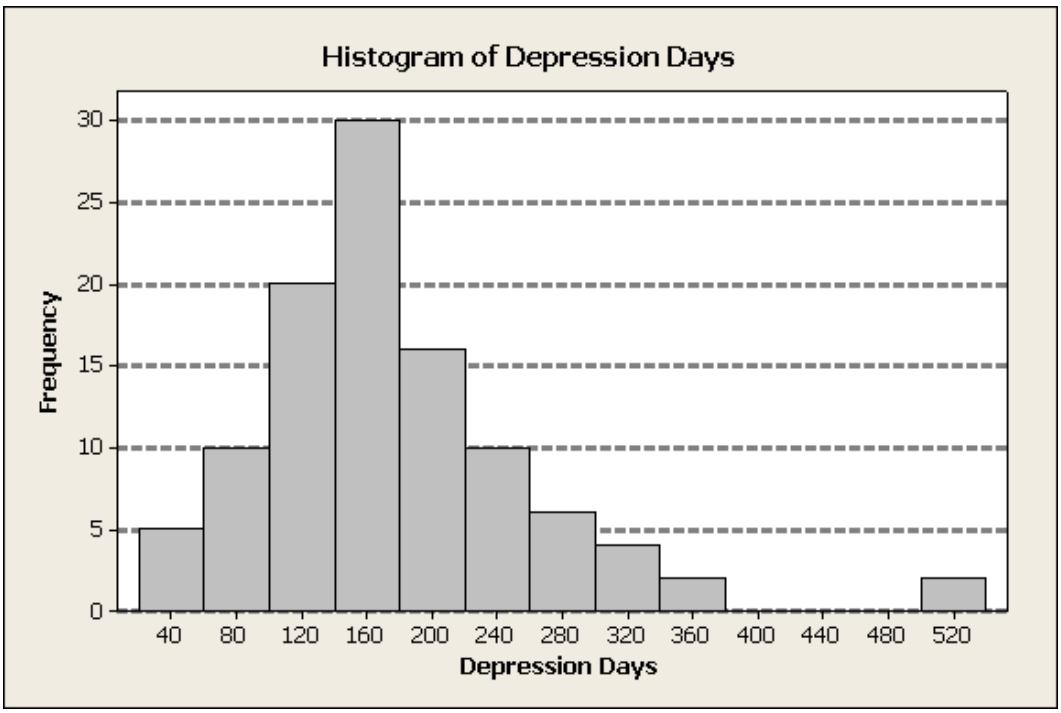
Here are some additional problems that will show you how all of this comes together.

In the workplace, depression is a leading cause of absenteeism and loss of productivity (Greenberg, et al. 1993). To assess the degree to which people suffer from depression, prior to receiving treatment, data were collected on the number of days that 105 patients were depressed prior to starting a new treatment. These data are displayed in the following table and histogram:

Depression Days

Days	Count
[20-60]	5
[60-100]	10
[100-140]	20
[140-180]	30
[180-220]	16
[220-260]	10
[260-300]	6

[300-340]	4
[340-380]	2
[380-420]	0
[420-460]	0
[460-500]	0
[500-540]	2



Question

1/1 point (graded)

Which of the following is a possible value of the median number of days that patients were depressed?

- 53
- 170 ✔
- 220
- 290

Answer

Correct: The median is the 53rd observation, whose value is 170 days.

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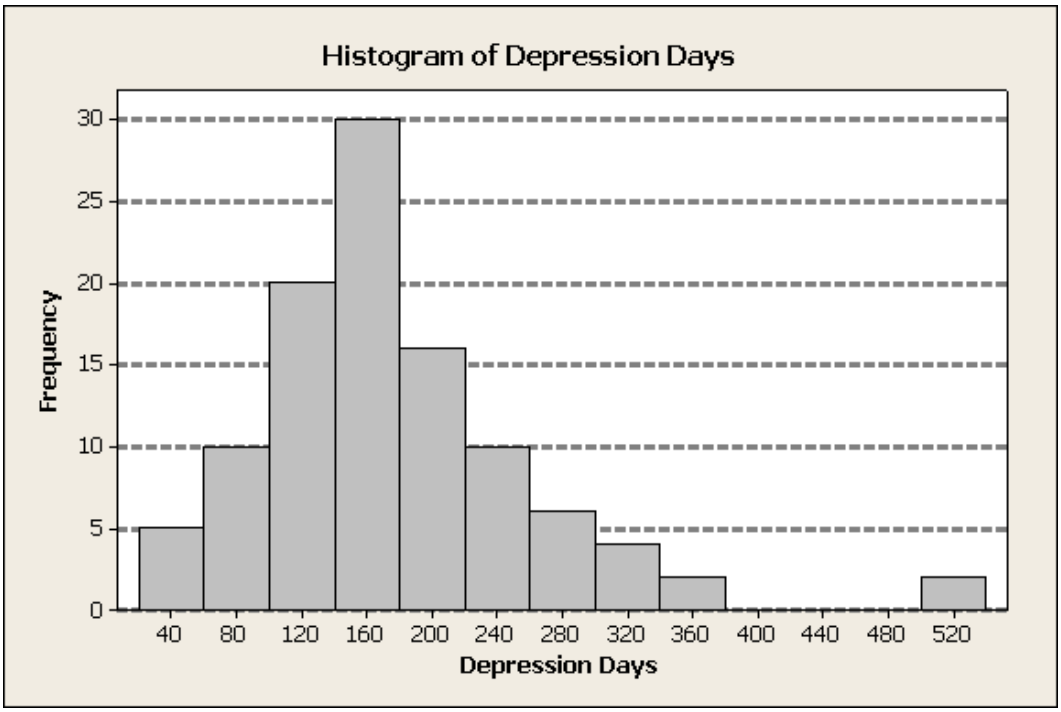
Question

1/1 point (graded)



Using this same histogram of 105 patients, which of the following is most likely to be true?

- (●) The mean will be larger than the median ✔
- ( ) The median will be larger than the mean
- ( ) The mean and median will be about the same

Answer
Correct: Since the distribution is skewed right, the mean will be larger than the median.

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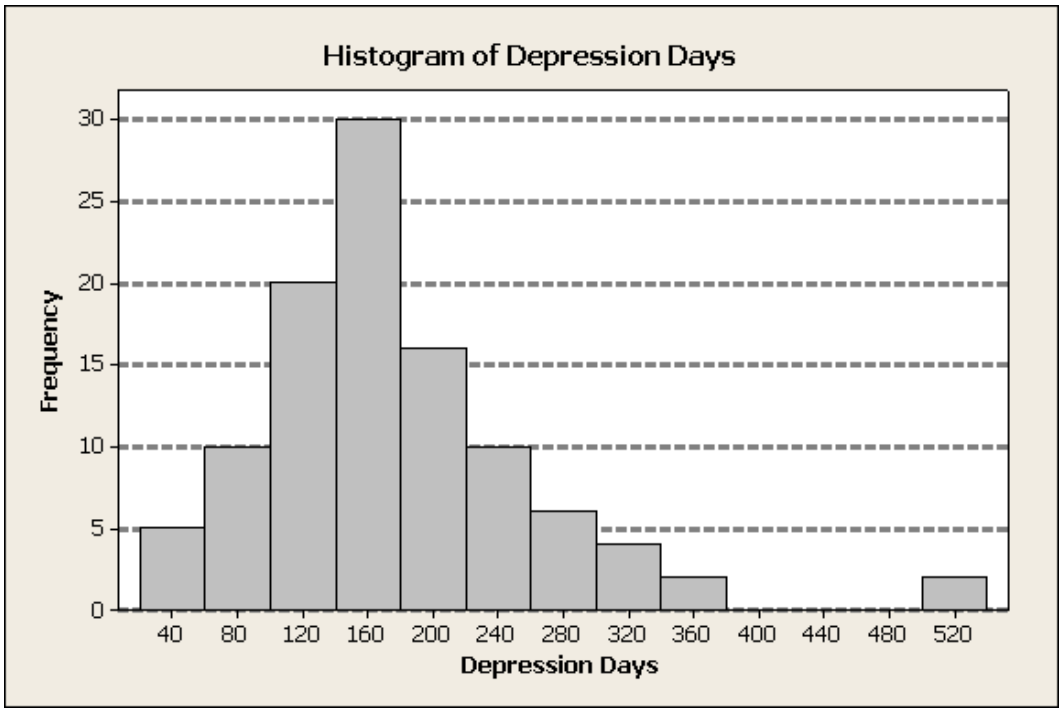
Question

1/1 point (graded)



Using this same histogram of 105 patients, what percentage of patients had 220 or more days of depression?

- 13%
- 23% ✔
- 24%

Answer
Correct:
To calculate the percentage, the number of patients, who experienced 220 or more days of depression (10 + 6 + 4 + 2 + 2 = 24) is divided by the total number of patients (105).

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