



Handout - The Beatles' 1961-62 Hamburg Performances

In 1961, The Beatles traveled to Hamburg, Germany for a series of performances, first at the Indra Club and then at the nearby Kaiserkeller club. During this residency, The Beatles performed 104 consecutive nights without a night off. On weekdays, they performed 4.5 hours of music during each of their 74 weekday shows. On weekends, they performed 6 hours of music during each of their 30 weekend shows.

Questions

1. *What is the total length in hours of The Beatles showtime during their first Hamburg trip?*

a. Using the information above, write an expression that describes how many hours The Beatles played during their first Hamburg trip.

Because performance length differed between weekend and weekday performances, you'll need to write two expressions. In the first expression, let "h" equal the number of performance hours on weekdays, with a "d" subscript to specify weekday, and let "s" equal the number of weekday shows. In the second expression, let "h" equal the number of performance hours on weekends, with an "e" subscript to specify weekend, and let "s" equal the number of weekend shows.

b. Evaluate the expression by plugging in the numerical information from the above paragraph above. Write your answer below.

2. *What's the total number of songs The Beatles could have played during all of their Hamburg shows?*

a. Write an expression that describes the average number of songs The Beatles could have performed during one of their Hamburg shows. Let "h" equal the total length in hours of The Beatles showtime during their first Hamburg trip, let "m" equal the number of minutes in an hour, and let "s" equal the average length of a Beatles song.



b. Evaluate the expression. For the sake of simplicity, we will say that the average Beatles song is 5 minutes long. Considering that information, plug in the numerical information, and include answers from any preceding questions into the formula. Write your answer below.

3. *How many hours did The Beatles perform between January 1961 and January 1962?*

a. Write an expression that describes how many hours The Beatles performed during these 12 months. Let “m” equal the number of months, let “s” equal the number of shows in a month, and let “l” equal the average show length in hours.

b. Evaluate the expression. Remember that The Beatles played shows over a 12 month time span, they averaged 30 shows a month, and the average show length was 3 hours. Write your answer below.

4. *How many songs could The Beatles have performed between January 1961 and January 1962?*

a. Write both the Let statement (“Let ‘m’ equal. . .”) and write an expression that describes how many songs The Beatles could have performed during these 12 months.

b. Evaluate the expression by plugging in the numerical information the answers above. Write your answer below.