



Handout 3 - Beatles Math

In 1961 The Beatles, all between the ages of 17 and 20, traveled to Hamburg, Germany for a series of performances, first at The Indra nightclub and then at the nearby Kaiserkeller. During this residency on their first of several similar pre-stardom trips to Hamburg, The Beatles performed 104 consecutive nights without a night off. On weekdays, they performed four-and-a-half hours of music. On weekends, they performed six hours of music.

Problem A

30 of the performances were on weekend nights.

74 of the performances were on weekday nights.

How many hours did The Beatles spend on stage during their first Hamburg trip? Show your work below.

Problem B

Though the length of songs varied, the average early Rock and Roll song was relatively short.

For the sake of simplicity, we will say that the average song The Beatles played in Hamburg was five minutes long. Using your answer from Problem A, determine how many songs The Beatles played in Hamburg. Show your work below.

Problem C

In the 12 months between January 1961 and January 1962 The Beatles played a rough average of 30 shows per month. The shows were of varying length. Assuming that an average show length was 3 hours, determine the following:

How many hours did The Beatles spend on stage during this period?

Using your answer from above and the assumed average of five-minute songs, how many songs did The Beatles play during this period?



THE BEATLES

Answer Guide (for teacher)

Problem A

30 of the performances were on weekend nights. [**6 hours x 30 shows = 180**]

74 of the performances were on weekday nights. [**4.5 hours x 74 shows = 333**]

How many hours did The Beatles spend on stage during their first Hamburg trip? Show your work below. [**513**]

Problem B

Though the length of songs varied, the average early Rock and Roll song was relatively short. For the sake of simplicity, we will say that the average song The Beatles played in Hamburg was five minutes long. Using your answer from Problem A, determine how many songs The Beatles played in Hamburg. Show your work below [**513 x 60 minutes = 30,780. 30,780/5 = 6,156**]

Problem C

In the 12 months between January 1961 and January 1962 The Beatles played a rough average of 30 shows per month. The shows were of varying length. Assuming that an average show length was 3 hours, determine the following:

How many hours did The Beatles spend on stage during this period? [**12 x 30 x 3 = 1,080**]

Using your answer from above and the assumed average of five-minute songs, how many songs did The Beatles play during this period? [**1,080x60 / 5 = 12,960**]