

Math 1303 - Math in the Liberal Arts

Quiz #9 - 2014.10.01

Solutions

1. A group of students was polled about their music tastes, and the answers were as follows:

A total of 47 students liked country music.

A total of 54 students liked hip-hop.

A total of 42 students liked rock and roll.

Only 3 students liked all three types of music.

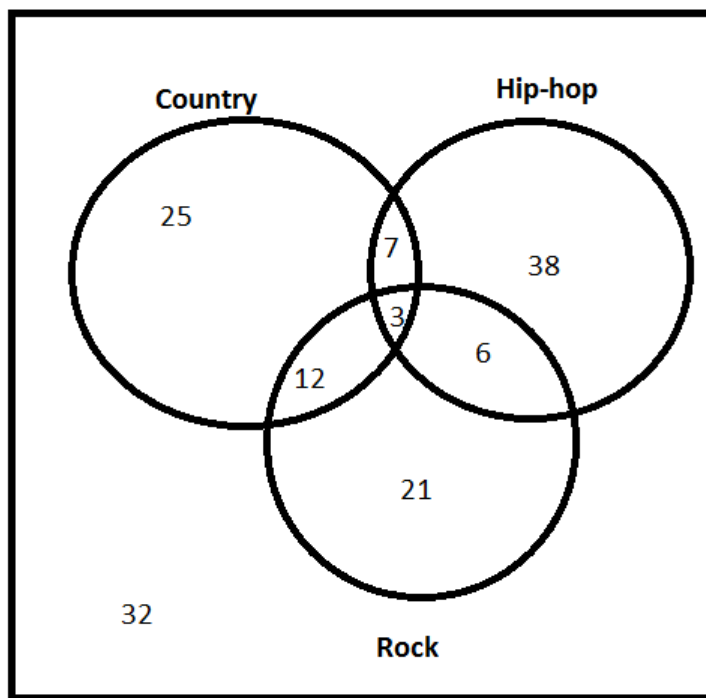
32 students did not like or listen to music.

15 students liked country music and rock and roll.

10 students liked country music and hip-hop.

21 students liked only rock and roll.

Construct a Venn Diagram to illustrate the above sentences, and use it to determine how many students were polled.



Adding up all the values in each region gives a total of 144 students.

2. A group of 125 students was polled about local restaurants.

A total of 39 students had never eaten at the given restaurants.

A total of 25 students had eaten at Tokyo Sushi.

A total of 74 students had eaten at Wendy's.

A total of 58 students had eaten at Main Street BBQ.

Everyone who had eaten at Toyko Sushi had also eaten one of the other restaurants.

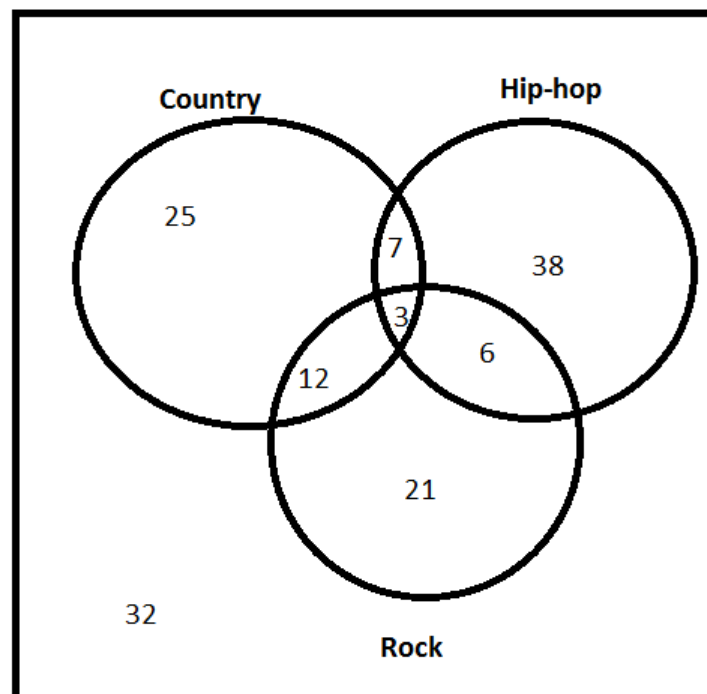
13 students had eaten at both Main Street BBQ and Tokyo Sushi.

46 students had eaten at both Main Street BBQ and Wendy's.

12 students had eaten at Wendy's and Tokyo Sushi, but not Main Street BBQ.

8 students had eaten only at Main Street BBQ.

Construct a Venn Diagram to illustrate the above sentences, and use it to determine how many students had eaten at all three restaurants.



According to the Venn diagram, 3 students have eaten at all three restaurants.