

Problem Solving Using Venn Diagrams

Venn diagrams are a powerful problem-solving tool. Make a diagram to solve the following problems. Write the appropriate numbers in each region.

Problem 1

Student athletes were surveyed to see whether they played basketball, soccer, or both. Of 100 students surveyed,

56 played basketball

24 played both basketball and soccer

68 played soccer

How many played basketball only?

How many played soccer only?

Problem 2

A school is taking three music organizations to a festival.

30 students sing in the choir

40 students play in the orchestra

50 students march in the band

15 students belong to the choir and the orchestra

10 students belong to the orchestra the band

14 students belong to the choir and the band

5 students belong to all three groups

How many students will need seats on the bus?

Problem 3

Ms. Wilson gave her algebra students three optional problems (A, B, and C) for extra credit. She calculated:

54% of the students did problem A

45% did B

36% did C

12% did A and B

17% did B and C

20% did A and C

5% did all three

What percent of the students did not turn in any of the problems?