

Name \_\_\_\_\_ ANSWER KEY \_\_\_\_\_ School Team \_\_\_\_\_

Event 5: Team Problems (with calculators)

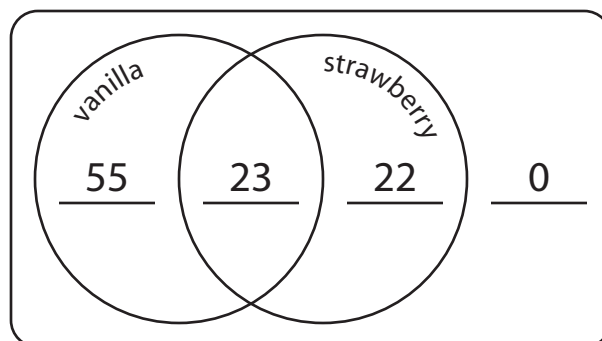
7th/8th grade Math Meet '08

Problem 4: Ice cream survey

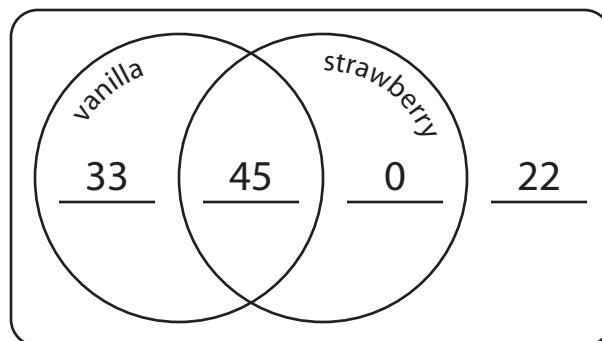
1) 100 people were asked whether or not they liked certain flavors of ice cream. 78 people said they liked vanilla, while 45 people said they liked strawberry.

Fill in the following Venn diagrams with the number of people in each category. (1 pt. each blank)

How many people would need to like vanilla only, strawberry only, or both in order to *minimize* the number of people who liked neither?



How many people would need to like vanilla only, strawberry only, or both in order to *maximize* the number of people who liked neither?

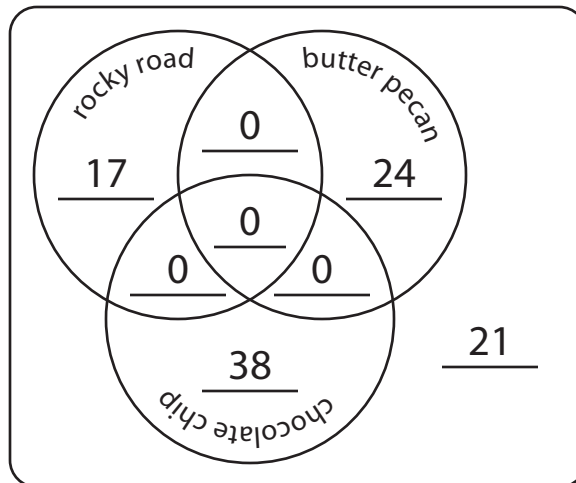


Problem 4: Ice cream survey

2) 100 more people were asked whether or not they liked some other flavors of ice cream. 17 people said they liked rocky road, 24 people said they liked butter pecan, and 38 people said they liked chocolate chip.

Fill in the following Venn diagrams with the number of people in each category. (1 pt. each blank)

How many people would need to like these flavors, or various combinations of them, in order to *minimize* the number of people who liked none of them?



Problem 4: Ice cream survey

2 continued)

Once again, 17 people said they liked rocky road, 24 people said they liked butter pecan, and 38 people said they liked chocolate chip.

How many people would need to like these flavors, or various combinations of them, in order to *maximize* the number of people who liked none of them? You should find that there are many possible solutions, so write the one which also minimizes the number who like all three.

