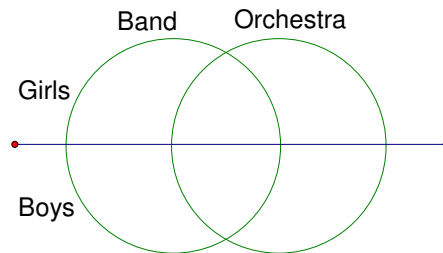


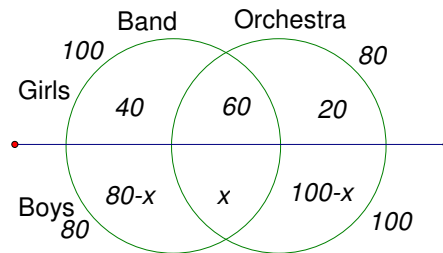
Name:

Date:

- $2007 - 1001 = 1006$. $1006 \div 2503$. There are 503 elements in $A \cap B^c$. So $|A| = |A \cap B^c| + |A \cap B| = 503 + 1001 = 1504$. **C**
- 5**
- There are 15 students in the Science Club, and 80% of them are in Math Club, so 12 of them are in Math Club. We know that 30% of the students in Math Club are also in Science Club, so we know that 30% of the Math Club is 12. So the full size of the Math Club is 40. **E**
- $x = 4$, so $x^2 - 8 = 8$ and $2x = 8$. $|A \cup B| = 8 + 4 + 8 = 20$.
- $\lfloor \frac{1000}{5} \rfloor = 200$, $\lfloor \frac{1000}{7} \rfloor = 142$, and $\lfloor \frac{1000}{5 \times 7} \rfloor = 28$. So there are $200 + 142 - 28 = 314$ numbers divisible by 5 or 7, and so there are $1000 - 314 = 686$ numbers not divisible by 5 or 7. **B**
- E**
- 39**
- First, create a modified Venn diagram and label the regions.



Next, fill in some of the information from the question.



We know that there are 230 students total. So we know there are $230 - 40 - 60 - 20 = 110$ boys in the Venn diagram. So $110 = 80 - x + x + 100 - x$. Solve, and $x = 70$. So the number of males in band NOT in orchestra is $80 - x = 80 - 70 = 10$. **A**