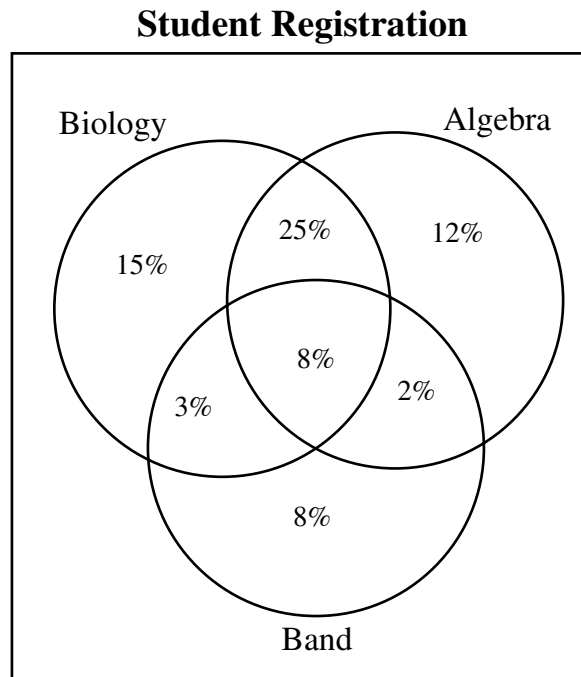


Question 9 is an open-response question.

- **BE SURE TO ANSWER AND LABEL ALL PARTS OF THE QUESTION.**
- **Show all your work (diagrams, tables, or computations).**
- **If you do the work in your head, explain in writing how you did the work.**

- 9 At student registration, eighth-grade students selected the courses they would be taking next year as ninth graders. The counselor made the diagram below that shows a relationship among the percentages of students who chose to take Biology, Algebra, and/or Band.



- According to the diagram, what percent of the eighth-grade students will be taking **all three** courses, Biology, Algebra, and Band, next year?
- What percent of the eighth-grade students will be taking Algebra and Biology, but **not** Band, next year?
- If 900 students signed up to take courses, how many will **not** be taking Biology, Algebra or Band? Show or explain your work.

10 If  $y + 5$  is an even integer, which of the following could be the value of  $y$ ?

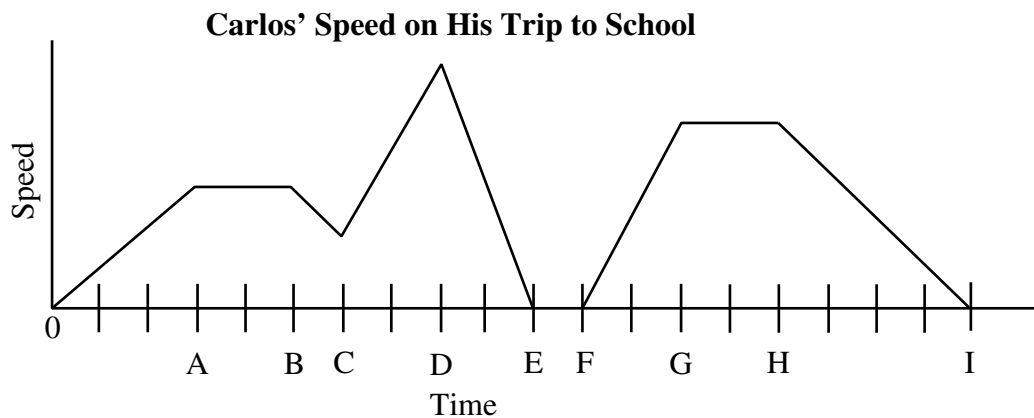
- A. -2
- B. -1
- C. 0
- D. 2

11 Which steps could be used to solve this equation?

$$\frac{2}{3}x + 9 = 15$$

- A. Subtract 9 from both sides, then multiply both sides by the reciprocal of  $\frac{2}{3}$ .
- B. Subtract 9 from both sides, then divide both sides by the reciprocal of  $\frac{2}{3}$ .
- C. Multiply both sides by the reciprocal of  $\frac{2}{3}$ , then subtract 9 from both sides.
- D. Divide both sides by the reciprocal of  $\frac{2}{3}$ , then subtract 9 from both sides.

12 The graph below shows Carlos' speed on his trip to school.



Based on the graph, when is Carlos' speed decreasing most rapidly?

- A. for times between B and C
- B. for times between D and E
- C. for times between E and F
- D. for times between H and I