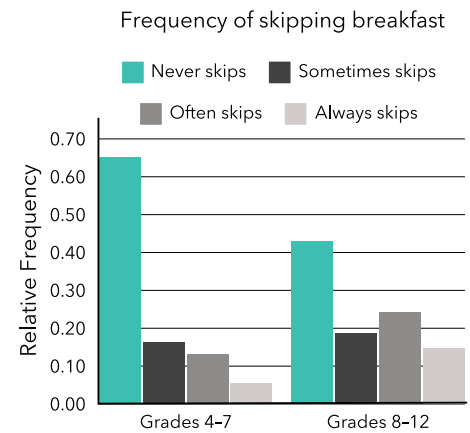


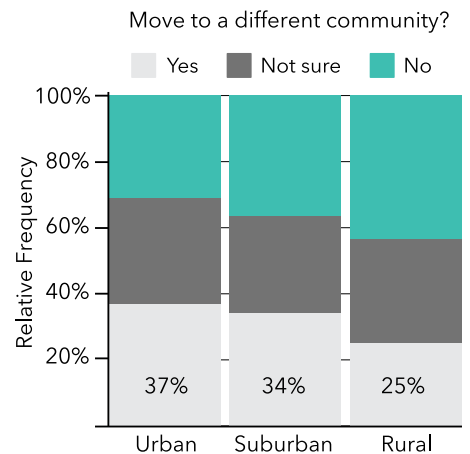
1. A research organization in Australia was interested in finding out how often school-aged students were skipping breakfast. The results are summarized in the side-by-side bar graphs.

- Estimate the percent of students in grades 4 – 7 that sometimes skip breakfast.
- Estimate the percent of students in grades 8 – 12 that sometimes skip breakfast.
- Do we know for certain that a greater number of students in the survey from grades 8 – 12 sometimes skip breakfast than from grades 4 – 7? Explain.



2. A recent Pew Research survey investigated the type of community people live in – classified as either urban, suburban, or rural. Survey respondents were asked if they would want to move to a different community. The graph shows the results.

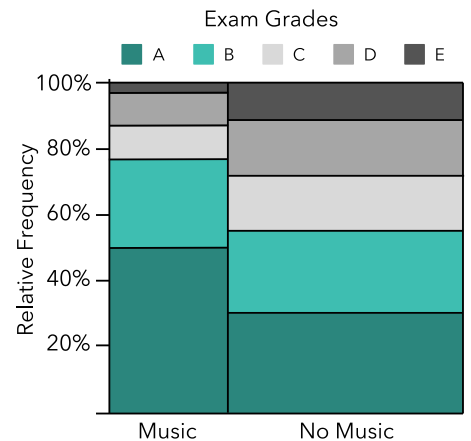
- Explain what the 37% in the first segmented bar graph represents.
- Explain what the 25% in the third segmented bar graph represents.
- There is an association between the type of community a person lives in and their opinion about moving to a different community. Explain why.



- Draw an example of what the segmented bar graphs would look like if there were no association.

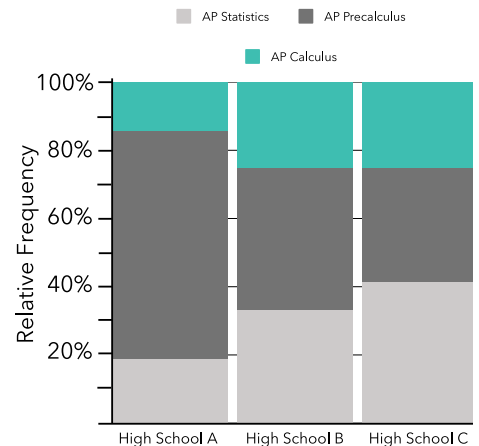
3. A curious AP Stats teacher wondered if playing music during an exam would increase scores. She had three classes of 30 students each. She decided to play music during the exam for one of the classes. The mosaic plot shows the results.

- What percent of the students who listened to music during the exam earned an A score on the exam?
- What percent of the students who didn't listen to music during the exam earned an A score on the exam?
- How much wider is the bar for "No music" than for "Music"? Explain why.
- Overall, how many students earned an A on the exam?
- How many students who didn't listen to music during the exam earned an E score on the exam?



4. The segmented bar graph displayed shows the relative frequency distribution of AP math course enrollment for three different high schools. Which of the following statements must be true?

- For high school A, there were more students enrolled in AP Calculus than AP Statistics.
- The number of students enrolled in AP Calculus is the same for high school B and high school C.
- For high school B, more than half of the AP math course enrollment is for AP Precalculus.
- For high school C, there were more students enrolled in AP Statistics than AP Calculus.



5. The mosaic plot shows the relative frequency of each grade level for three varsity sports teams at a local high school. Which of the following statements must be true?
- A) The football team has a higher percent of 11th graders than the volleyball team.
- B) All three teams have at least one 9th grade player.
- C) The basketball team has more 9th graders than any other grade level.
- D) There are more 12th graders on the football team than 12th graders on the volleyball team.

