

Lesson Summary

When solving problems in which a ratio between two quantities changes, it is helpful to draw a 'before' tape diagram and an 'after' tape diagram.

Problem Set

1. Shelley compared the number of oak trees to the number of maple trees as part of a study about hardwood trees in a woodlot. She counted 9 maple trees to every 5 oak trees. Later in the year there was a bug problem and many trees died. New trees were planted to make sure there was the same number of trees as before the bug problem. The new ratio of the number of maple trees to the number of oak trees is 3: 11. After planting new trees, there were 132 oak trees. How many more maple trees were in the woodlot before the bug problem than after the bug problem? Explain.
2. The school band is comprised of middle school students and high school students, but it always has the same maximum capacity. Last year the ratio of the number of middle school students to the number of high school students was 1: 8. However, this year the ratio of the number of middle school students to the number of high school students changed to 2: 7. If there are 18 middle school students in the band this year, how many fewer high school students are in the band this year compared to last year? Explain.