

The Problem

The school band is making a large banner for its annual fall concert. After the band members worked for one hour, the band director entered the room and asked how many feet long the completed banner would be. The trombone section leader replied, “We’re not sure. The trombone section and the clarinet section work at different rates, but we are sure that the length of the banner will be 40 feet and $\frac{1}{2}$ the total banner’s length.”

How long will the banner be?



Strategies and Hints

1. If the band director told the group that the banner should be more than 45 feet long, what would be their reply?
2. Could the algebra teacher have helped the band teacher determine how long the banner would be? How?
3. Identify the variables for the problem and write an equation.

Extension

If the length of another banner made by the clarinet section is 15 feet plus $\frac{1}{3}$ of the length of the total banner, how long is their banner?