Lesson 2 Summary

There are 12 inches in a foot, so we can say that for every 1 foot, there are 12 inches, or the ratio of feet to inches is 1:12. We can find the unit rates by dividing the numbers in the ratio:

\[
1 \div 12 = \frac{1}{12} \quad \text{so there is} \quad \frac{1}{12} \quad \text{foot per inch.}
\]

\[
12 \div 1 = 12 \quad \text{so there are} \quad 12 \quad \text{inches per foot.}
\]

The numbers in a ratio can be fractions, and we calculate the unit rates the same way: by dividing the numbers in the ratio. For example, if someone runs $\frac{3}{4}$ mile in $\frac{11}{2}$ minutes, the ratio of minutes to miles is $\frac{11}{2}:\frac{3}{4}$.

\[
\frac{11}{2} \div \frac{3}{4} = \frac{22}{3} \quad \text{so the person’s pace is} \quad \frac{22}{3} \quad \text{minutes per mile.}
\]

\[
\frac{3}{4} \div \frac{11}{2} = \frac{3}{22} \quad \text{so the person’s speed is} \quad \frac{3}{22} \quad \text{miles per minute.}
\]