

Imperial Measures of Length

The most common **imperial units** are: the inch, the foot, the yard, and the mile. We can use a personal *referent* to estimate a length. A **referent** is an approximate measure for an imperial unit. Thumb length, foot length, and arm span are all referents.

Unit	Referent	Relationship Between Units
Inch (in.)	Thumb length	
Foot (ft.)	Foot length	1 ft. = 12 in.
Yard (yd.)	Arm span	1 yd. = 3 ft. = 36 in.
Mile (mi.)	Distance walked in 20 minutes	1 mi. = 1760 yd. = 5280 ft.

Example 1: Estimating Lengths Using Imperial Units

Q. Describe how you would estimate the width of your locker.

A.

Example 2: Converting Between Imperial Units

Q. Convert:

- 5 miles to yards
- 100 inches to feet and inches

A.

Example 3: Problems Involving Conversions

Q. Alex purchased 7 yards of ribbon to trim some napkins. The ribbon is sewn around a napkin, which is 14 inches wide and 16 inches long. How many napkins can Alex trim with this ribbon?

A.

Example 4: Problems Involving Scale Diagrams

Q. A map of Manitoba has a scale of 1:6 500 000. Mr. Shumsky wants to go from his hometown of Oakbank to visit his grandma in Dauphin. The distance between Oakbank and Dauphin is $2\frac{3}{5}$ in. What is the distance between the two locations?

A.

Hints:

1. It takes **MORE** smaller units to measure the same length, so the number should **INCREASE** as you convert from larger units such as the mile to smaller units such as the inch.
2. When problem solving, it's often easier to convert to the smaller unit.
3. Using a **unit analysis** will ensure your final conversion unit is correct.

Homework: Pg. 11-12: Odd #'s ONLY