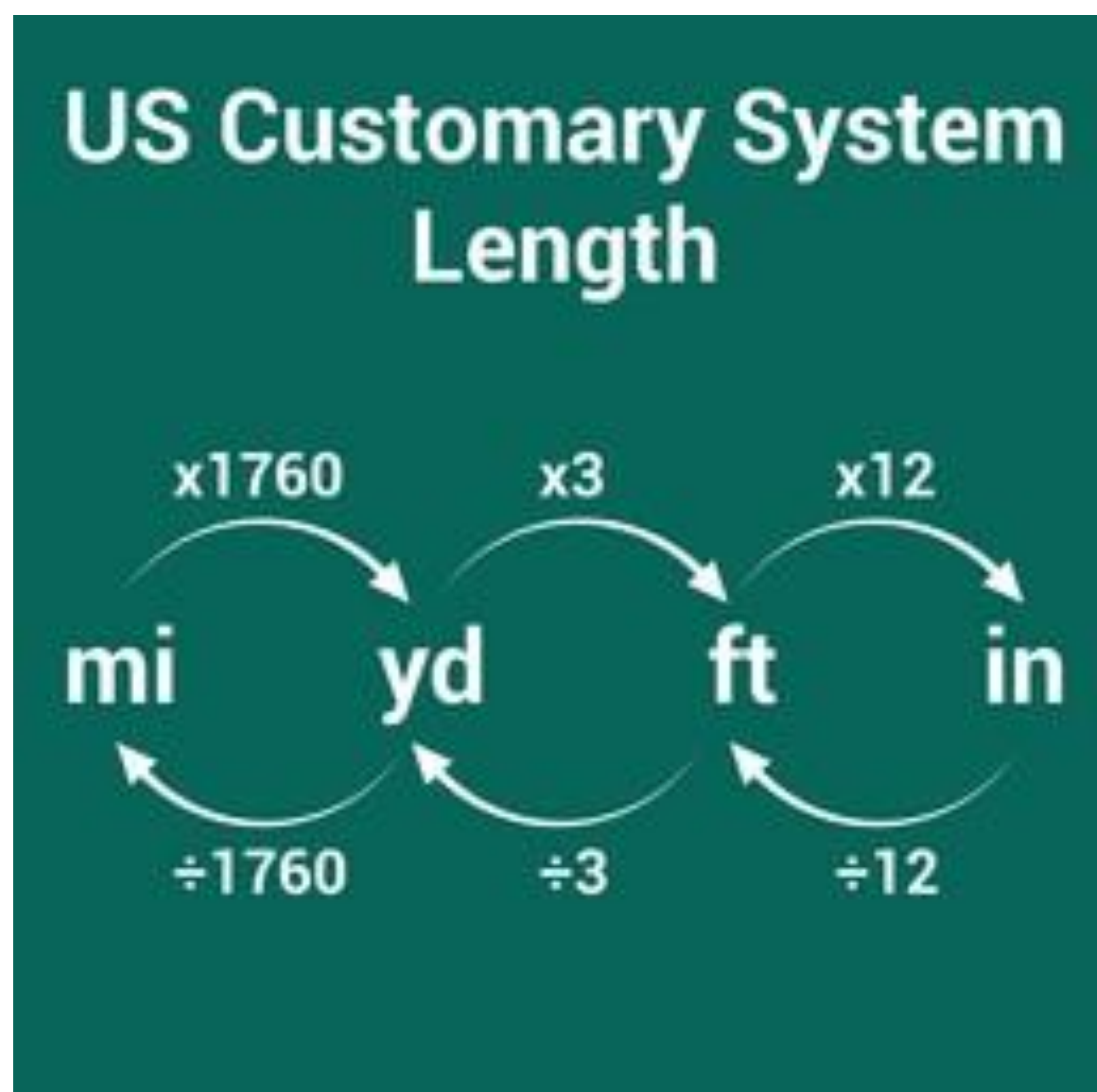
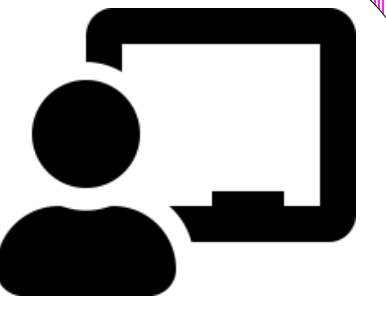


# Compare and Convert Customary units of length

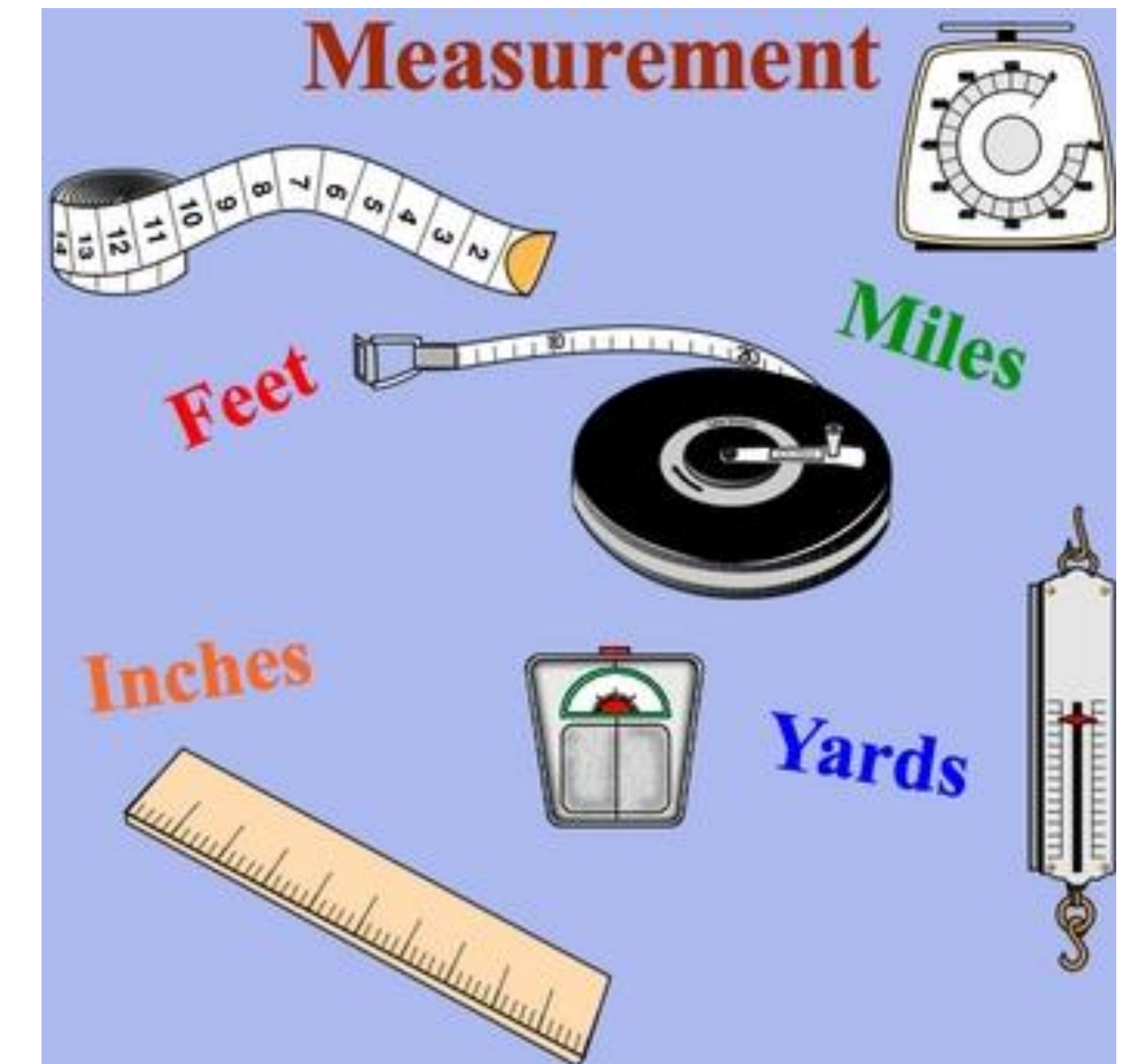




# Compare and Convert customary units of length

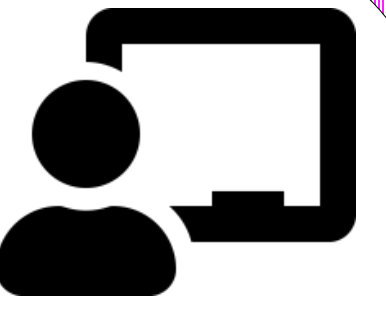


- To compare and convert customary units of length, you need to know the relationship between different units and how to use factors of multiplication or division to scale them up or down.



- The customary system is a system of measurement that uses the different units such as the inches, foot, yard and the mile.



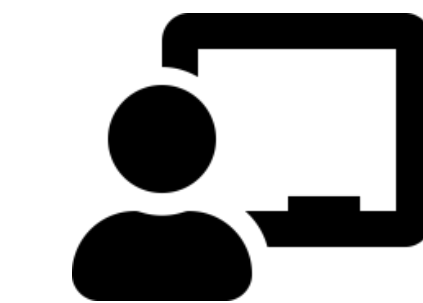


# Customary units of length:

□ In the metric system, the SI unit of length is a meter which is defined as follows:

- **Inches (in)**
- **Foot (ft)**
- **Yard (yd)**
- **Mile (mi)**





## Converting Larger Units to Smaller Units:      Converting Smaller Units to Larger Units:

**□ 1 foot = 12 inches**

**□ 1 yard = 3 feet**

**□ 1 mile = 5280 feet**

**□ 1 mile = 1760 yards**

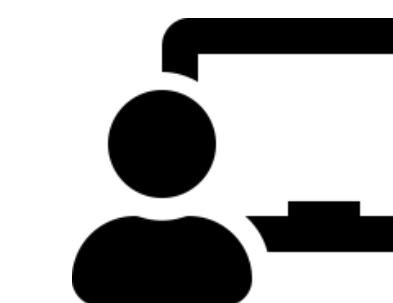
**□ 1 inch =  $\frac{1}{12}$  foot**

**□ 1 foot =  $\frac{1}{3}$  yard**

**□ 1 foot =  $\frac{1}{5280}$  mile**

**□ 1 yard =  $\frac{1}{1760}$  mile**





# Customary units conversion

Larger unit to a smaller unit

Multiply 

- ❑ 1 foot = 12 inches
- ❑ 1 yard = 3 feet
- ❑ 1 mile = 5280 feet
- ❑ 1 mile = 1760 yards

Smaller unit to a larger unit

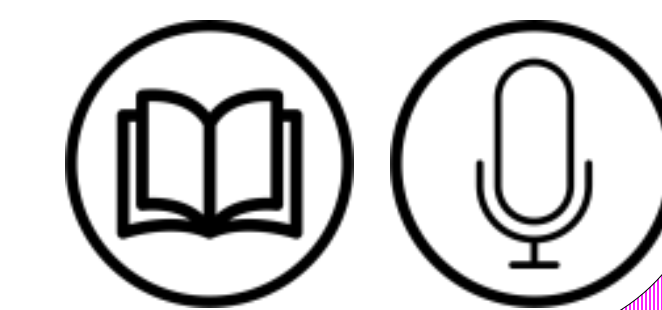
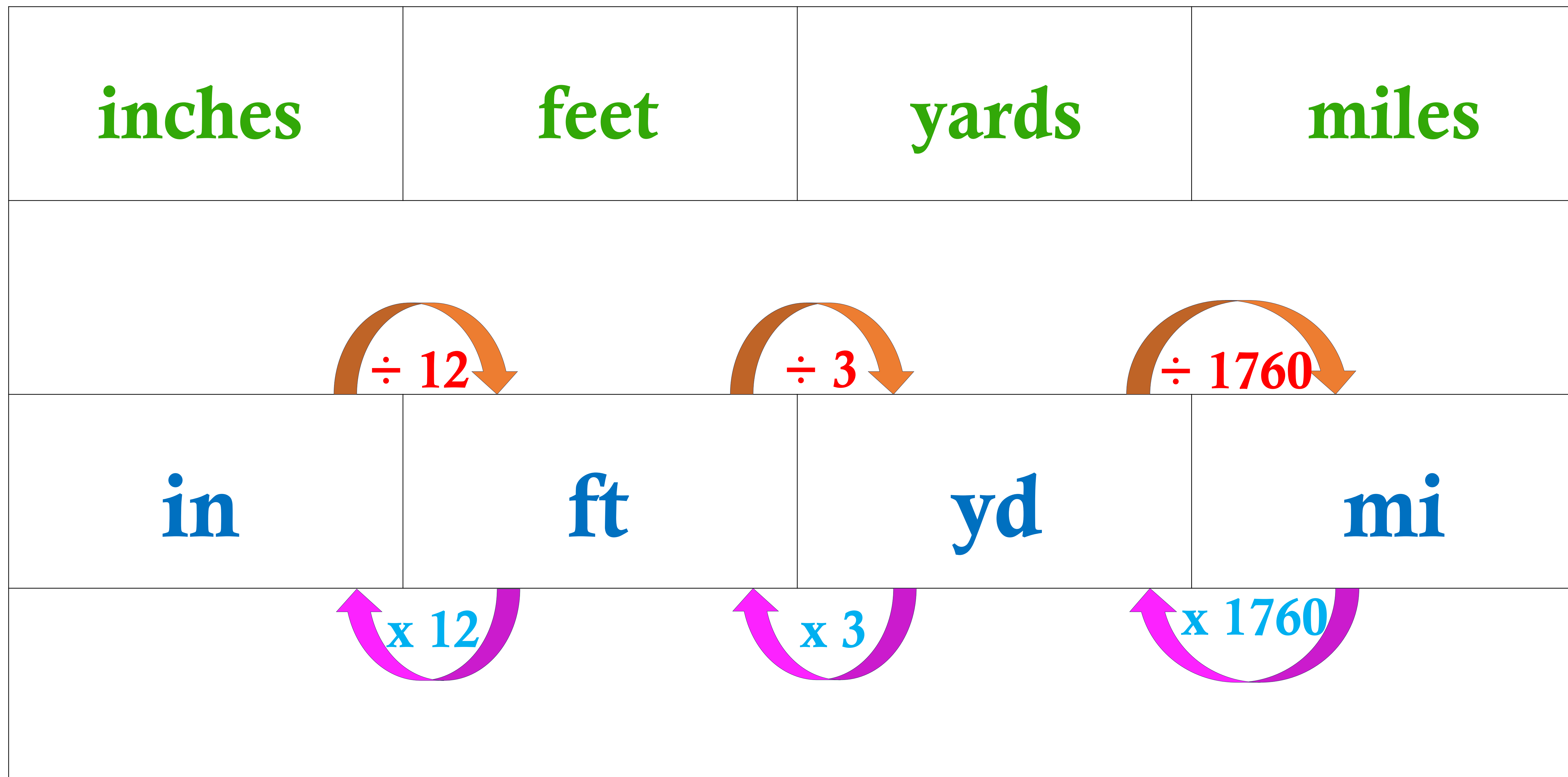
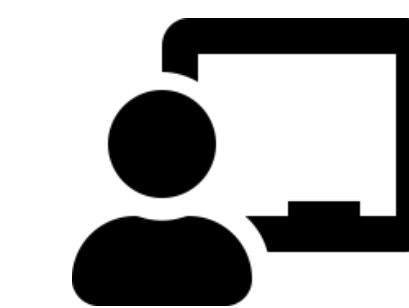
Divide 

- ❑ 1 inch =  $\frac{1}{12}$  foot
- ❑ 1 foot =  $\frac{1}{3}$  yard
- ❑ 1 foot =  $\frac{1}{5280}$  mile
- ❑ 1 yard =  $\frac{1}{1760}$  mile





# Customary units of length conversion formula :





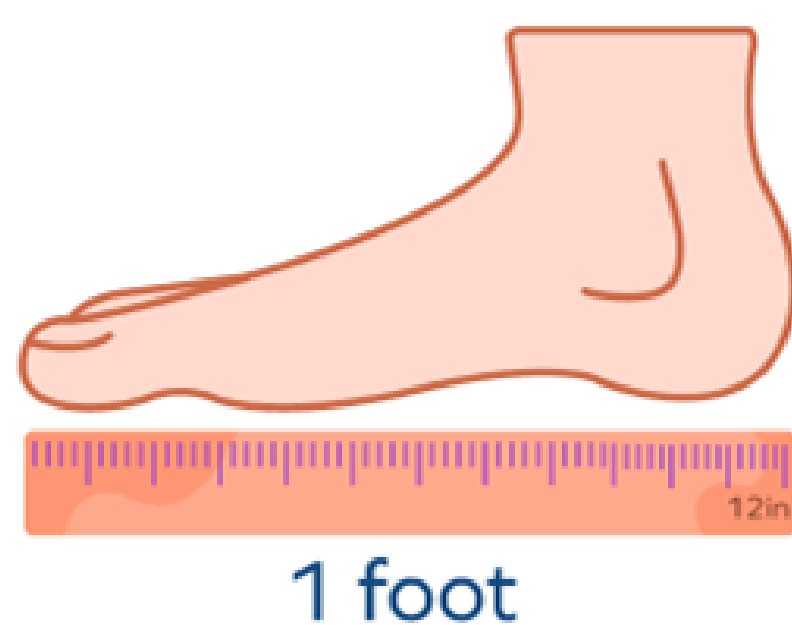
## Example: 1

To convert **10 feet to inches.**

### Solution:

To convert a larger unit to a smaller unit, we need to multiply.

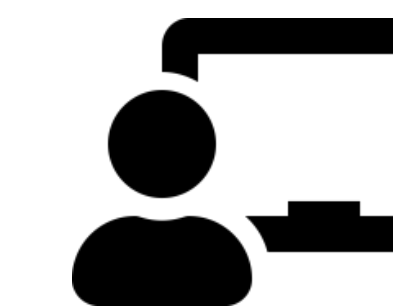
$$1 \text{ foot} = 12 \text{ inches}$$



$$10 \text{ feet} = ?$$

$$10 \times 12 = 120 \text{ inches}$$

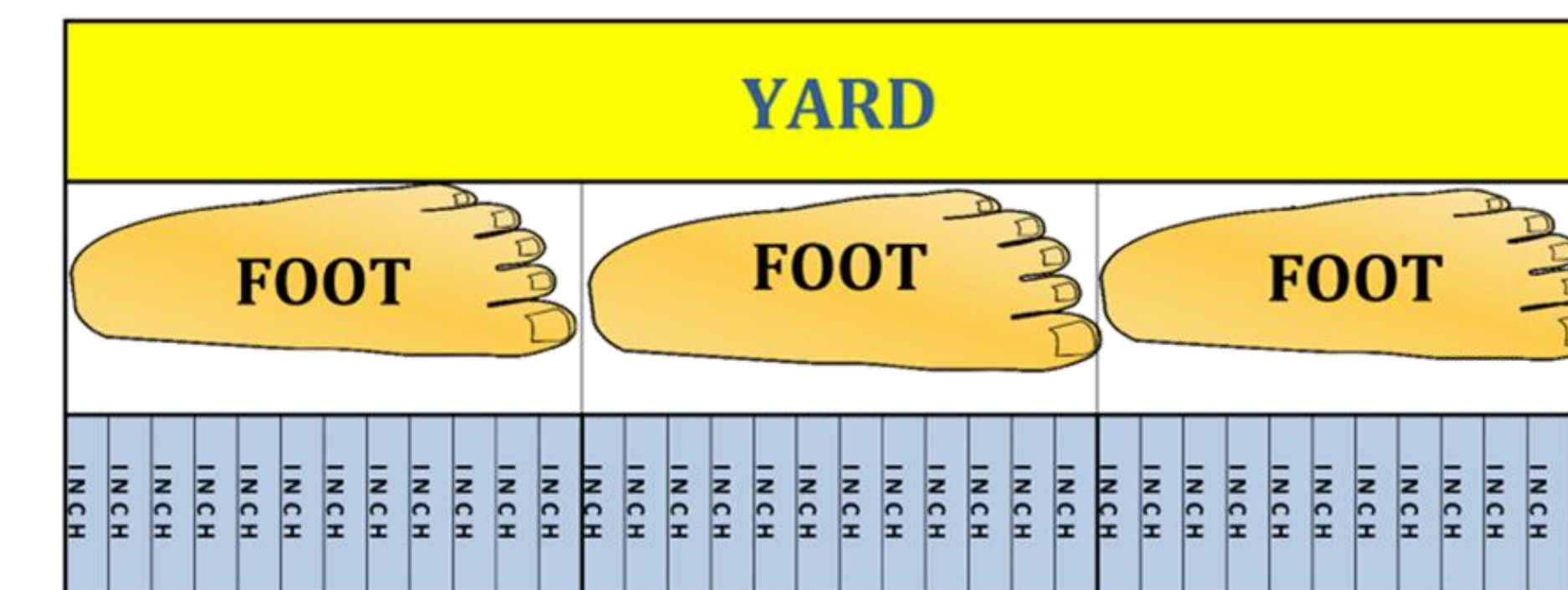
So, there are **120 inches** in **10 feet.**



## Example: 2

To convert **33 yards to feet.**

### Solution:



1 yard = 3 feet = 36 inches

To convert a larger unit to a smaller unit, we need to multiply.

$$1 \text{ yard} = 3 \text{ feet}$$

$$33 \text{ yards} = ?$$

$$33 \times 3 = 99 \text{ feet}$$

So, there are **99 feet** in **33 yards.**



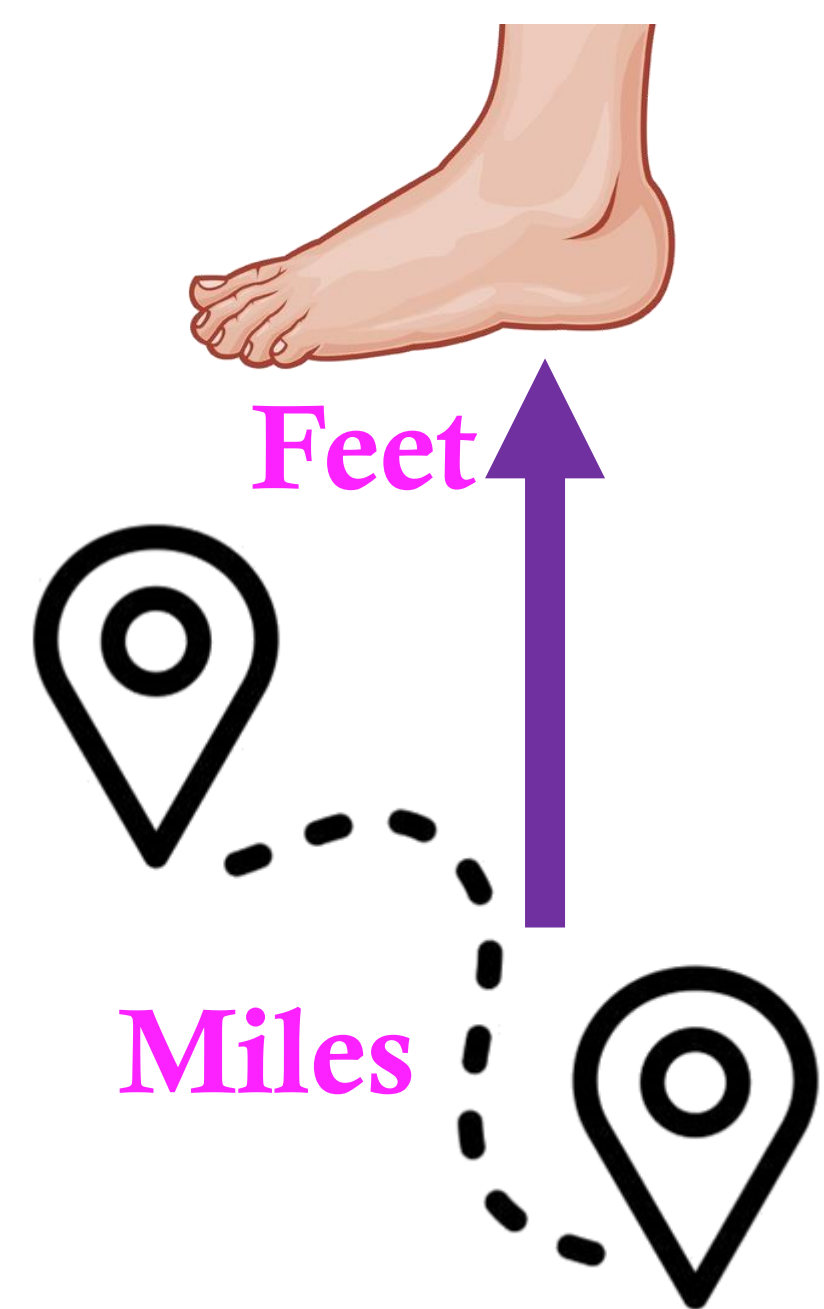


### Example: 3

To convert 2 miles to feet.

#### Solution:

To convert a larger unit to a smaller unit, we need to multiply.

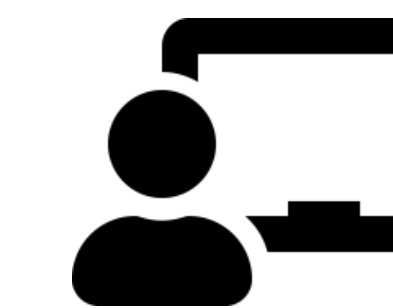


$$1 \text{ mile} = 5280 \text{ feet}$$

$$2 \text{ miles} = ?$$

$$2 \times 5280 = 10560 \text{ feet}$$

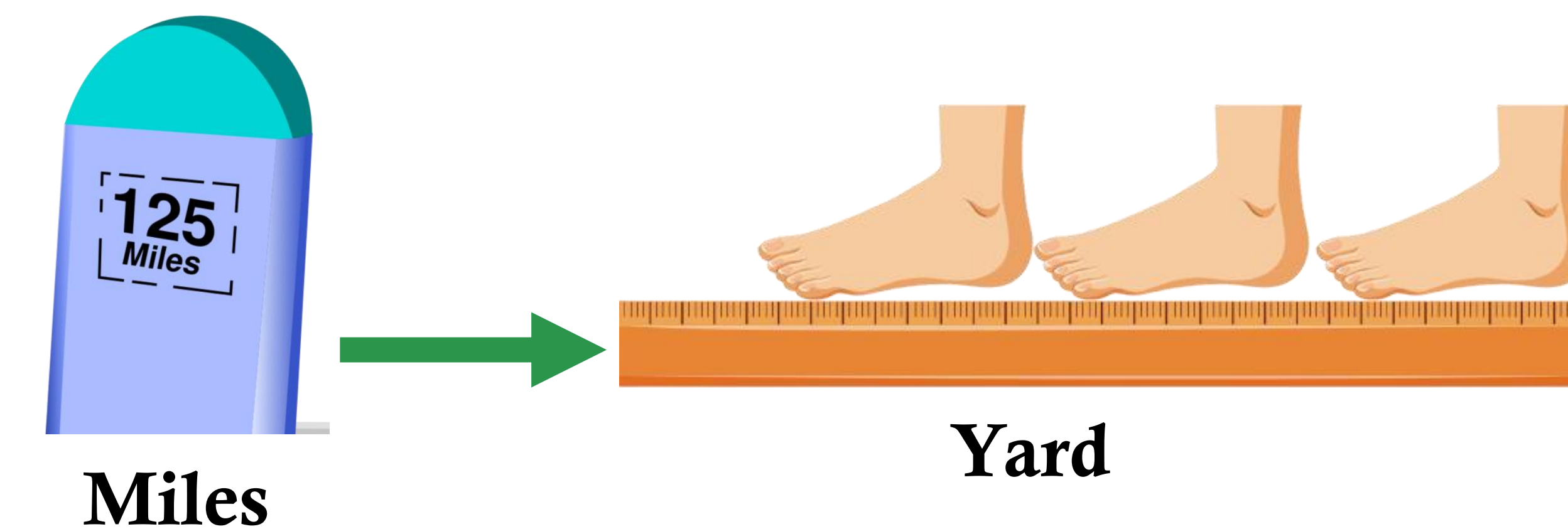
So, there are 10560 feet in 2 miles.



### Example: 4

To convert 5 miles to yards.

#### Solution:



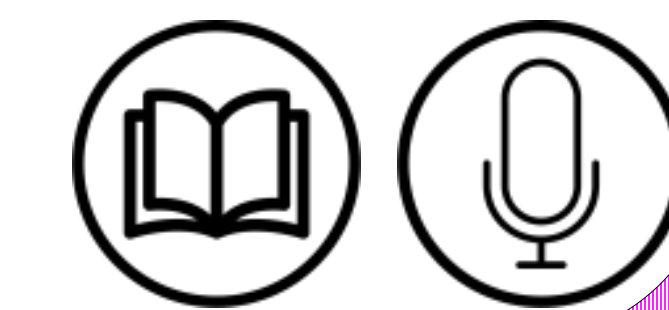
To convert a larger unit to a smaller unit, we need to multiply.

$$1 \text{ mile} = 1760 \text{ yards}$$

$$5 \text{ miles} = ?$$

$$5 \times 1760 = 8800 \text{ yards}$$

So, there are 8800 yards in 5 miles.





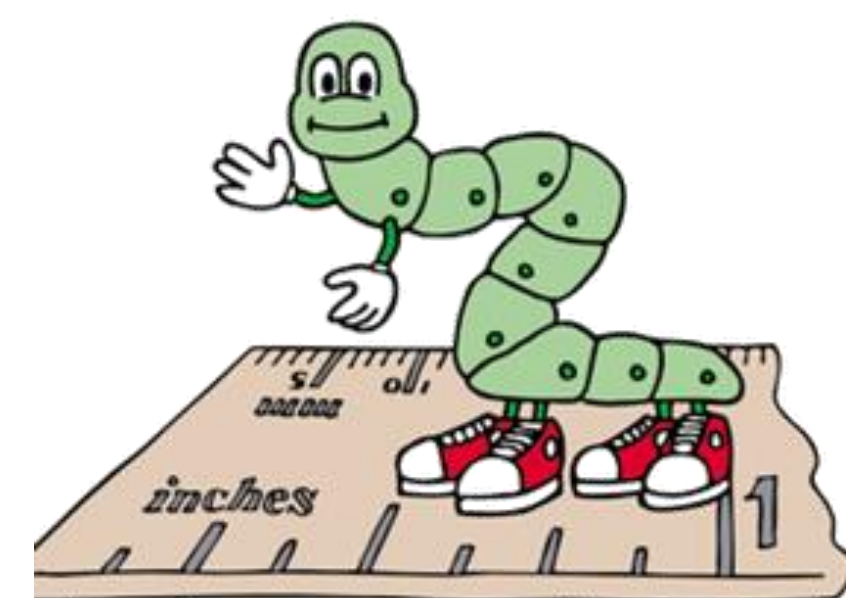


## Example: 5

To convert 48 inches to feet.

### Solution:

To convert a smaller unit to a larger unit, we need to divide.



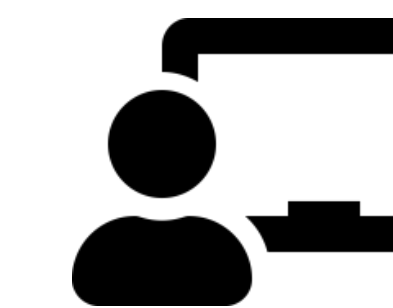
$$1 \text{ inch} = \frac{1}{12} \text{ foot}$$

$$48 \text{ inches} = ?$$

$$48 \div 12 = 4 \text{ feet}$$



So, there are 4 feet in 48 inches.

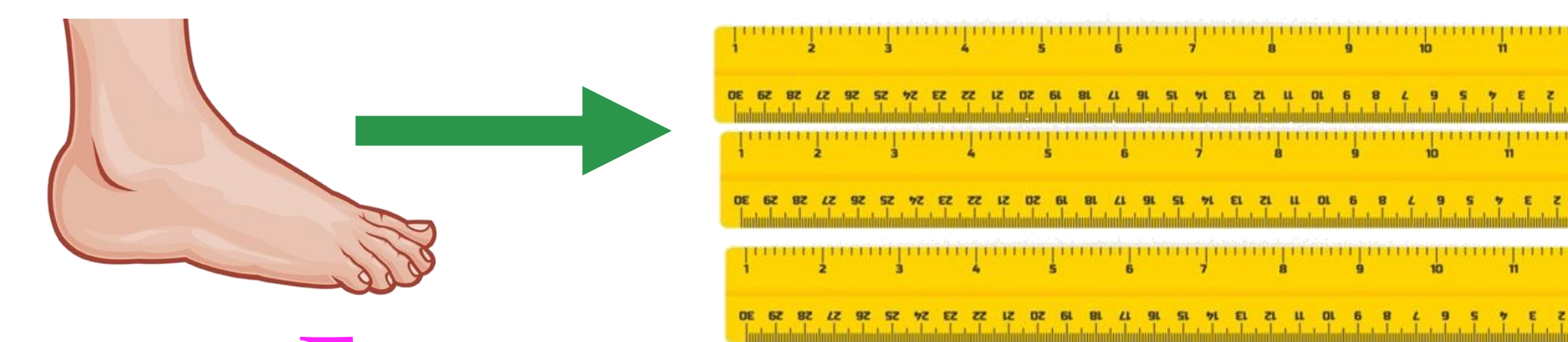


## Example: 6

To convert 81 feet to yards.

### Solution:

To convert a smaller unit to a larger unit, we need to divide.



$$1 \text{ foot} = \frac{1}{3} \text{ yards}$$

$$81 \text{ feet} = ?$$

$$81 \div 3 = 27 \text{ yards}$$

So, there are 27 yards in 81 feet.



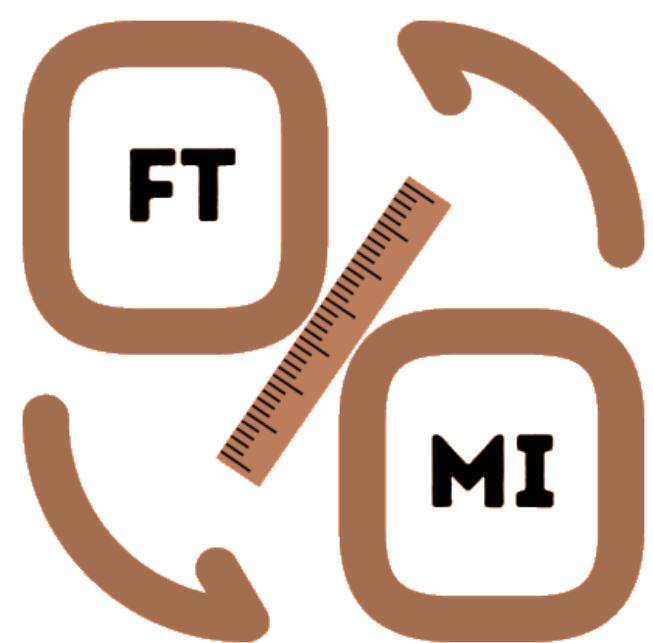


## Example: 7

To convert **10560 feet** to miles.

### Solution:

To convert a smaller unit to a larger unit, we need to **divide**.

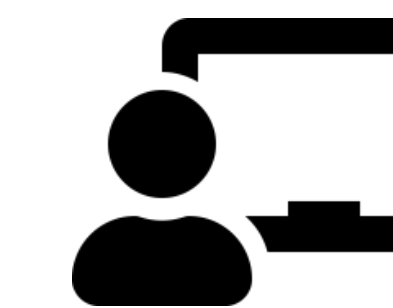


$$1 \text{ foot} = \frac{1}{5280} \text{ mile}$$

$$10560 \text{ feet} = ?$$

$$10560 \div 5280 = 2 \text{ miles}$$

So, there are **2 miles** in **10560 feet**.

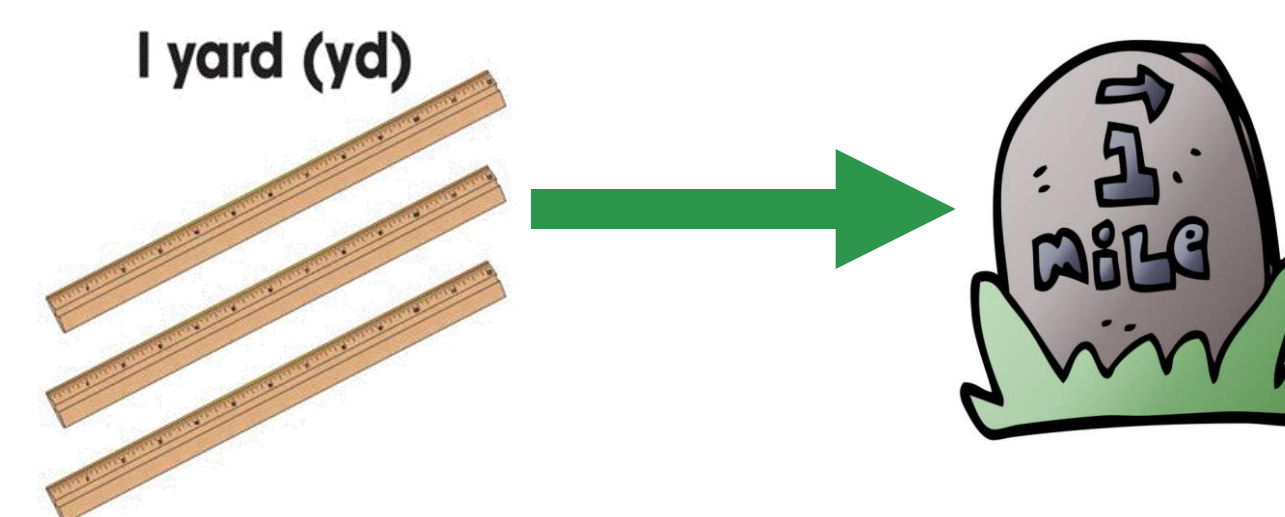


## Example: 8

To convert **7040 yards** to miles.

### Solution:

To convert a smaller unit to a larger unit, we need to **divide**.



$$1 \text{ yard} = \frac{1}{1760} \text{ mile}$$

$$7040 \text{ yards} = ?$$

$$7040 \div 1760 = 4 \text{ miles}$$

So, there are **4 miles** in **7040 yards**.

