



SKILL 3: Converting Units in the Customary System

The customary system is another system of measurement. It is not based on powers of 10. In order to convert from one unit to another, you need to know the **conversion factor**, or the number of units that another unit is equal to.

Length	Weight	Liquid Capacity
1 foot (ft) = 12 inches (in.) 1 yard (yd) = 3 feet (ft) 1 mile (mi) = 5,280 feet (ft)	1 pound (lb) = 16 ounces (oz)	1 gallon (gal) = 4 quarts (qt)

To convert from a larger unit to a smaller unit, you multiply by the appropriate conversion factor. To convert from a smaller unit to a larger unit, you divide by the appropriate conversion factor.

Example 1

How many feet are in 3 yards?

When you convert from a larger unit (yard) to a smaller unit (foot), multiply the number of yards by the number of feet in a yard.

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

$$3 \times 3 = 9$$

There are 9 feet in 3 yards.

Example 2

How many feet are in 24 inches?

When you convert from a smaller unit (inch) to a larger unit (foot), divide the number of feet by the number of inches in a foot.

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

$$24 \div 12 = 2$$

There are 2 feet in 24 inches.

Guided Practice

1. Convert 48 ounces to pounds.

a. Are you converting from a smaller unit to a larger unit or from a larger unit to a smaller unit? _____

b. Will you multiply or divide? _____

c. What number will you multiply or divide by? _____

d. 48 ounces = _____ pounds

Convert.

2. 16 quarts = _____ gallons

3. 10 miles = _____ feet

4. 5 feet = _____ inches

5. 100 pounds = _____ ounces

6. 10,560 feet = _____ miles

7. 16 gallons = _____ quarts

SKILL 3: Practice

Convert.

- | | |
|-------------------------------|-------------------------------|
| 1. 21 feet = _____ inches | 2. 21 feet = _____ yards |
| 3. 4 miles = _____ feet | 4. 15 pounds = _____ ounces |
| 5. 36 quarts = _____ gallons | 6. 360 inches = _____ feet |
| 7. 48 ounces = _____ pounds | 8. 31 gallons = _____ quarts |
| 9. 35 yards = _____ feet | 10. 8 quarts = _____ gallons |
| 11. 42,240 feet = _____ miles | 12. 80 ounces = _____ pounds |
| 13. 63 gallons = _____ quarts | 14. 32 quarts = _____ gallons |
| 15. 39 feet = _____ yards | 16. 18 miles = _____ feet |
| 17. 23 gallons = _____ quarts | 18. 96 ounces = _____ pounds |
| 19. 132 inches = _____ feet | 20. 71 yards = _____ feet |
| 21. 60 quarts = _____ gallons | 22. 31 pounds = _____ ounces |
| 23. 23 gal = _____ qt | 24. 42 ft = _____ yd |
| 25. 84 qt = _____ gal | 26. 46 lb = _____ oz |
| 27. 276 in. = _____ ft | 28. 51 yd = _____ ft |
| 29. 656 oz = _____ lb | 30. 53 ft = _____ in. |
| 31. 26 lb = _____ oz | 32. 127 mi = _____ ft |

Solve.

33. A gray whale can be up to 540 inches in length.
How many feet is that? How many yards?

34. G. Graham of Edmond, Oklahoma, grew a pumpkin
weighing 7.75 lb. How many ounces is that?



35. How many inches are in 36 feet?
Skill 3
- | | |
|----------|-----------|
| A 3 in. | C 108 in. |
| B 12 in. | D 432 in. |

36. How many kiloliters are in
800 liters?
Skill 2
- | | |
|-----------|---------|
| F 0.08 kL | H 8 kL |
| G 0.8 kL | J 80 kL |