Converting within the Customary Units

Ratios can be used to help convert from one customary measurement to another. However, you need to know the conversion rates.

Length	Capacity	Mass
1 ft. = 12 in.	1 gal. = 4 qt.	1g = 1,000 mg
1 yd. = 3 ft.	1 qt. = 2 pt.	1kg = 1,000g
5,280 ft. = 1 mile	1 pt. = 2 c.	1 lb. = 16 oz.
	1 c = 8 fl. oz	2,000 lb. = 1 ton

Example: Convert 15 feet to inches.

Step 1:
To convert from feet to inches we need a conversion rate that will be set up as inches/feet.

15 ~~ft.~~ x 12 in./~~ft.~~

Step 2:
The feet units cancel and we just need to multiply.
15 x 12 = 180 inches

Convert the following measurements.

1. 3 yards = _____ inches

2. 64 cups = _____ gallons

3. 6,500 lbs. = _____ tons

4. 2.5 gallons = _____ cups

5. Write an equation that can be used to convert gallons to cups, where g is the number of gallons and c is the number of cups. _____

6. Melinda likes to mix 6 cups water to 1 cup of lemonade mix. How much lemonade mix would she need if she uses a gallon of water?

_____

7. Stanley measured his backyard to be 1500 inches long. How long is his backyard in yards?

_____

8. Write an equation that could be used to convert x miles into y inches.

_____

Name: _____

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15 ~~ft.~~ x 12 in./~~ft.~~

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15 x 12 = 180 inches

Convert the following measurements.

1. 3 yards = __**36 inches**__ inches

2. 64 cups = __**4 gallons**__ gallons

3. 6,500 lbs. = __**3.25 tons**__ tons

4. 2.5 gallons = __**40 cups**__ cups

5. Write an equation that can be used to convert gallons to cups, where g is the number of gallons and c is the number of cups. __**c = 16g**__

6. Melinda likes to mix 6 cups water to 1 cup of lemonade mix. How much lemonade mix would she need if she uses a gallon of water?

 2 2/3 cups of lemonade mix

7. Stanley measured his backyard to be 1500 inches long. How long is his backyard in yards?

 41 yards and 2 feet or 41 2/3 yards

8. Write an equation that could be used to convert x miles into y inches.

 y = 63,360x