

Homework & Practice 13-2

Equivalence with Customary Units of Capacity

Another Look!

Lance has an 8-gallon aquarium. How many 2-quart containers will it take to fill the aquarium?

DATA

Customary Units of Capacity

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 c = 16 fl oz

1 quart (qt) = 2 pt = 4 c

1 gallon (gal) = 4 qt = 8 pt

Step 1

Convert 8 gallons to quarts.

Gallons	Quarts
2	8
4	16
6	24
8	32

8 gallons = 32 quarts



Use the correct units as you solve measurement problems.

Step 2

Divide 32 quarts by 2.

$$\begin{array}{r}
 16 \\
 2 \overline{)32} \\
 \underline{-2} \\
 12 \\
 \underline{-12} \\
 0
 \end{array}$$

It takes 16 of the 2-quart containers to fill the tank.

For 1–6, convert each unit.

- 9 pints = _____ fluid ounces
- 16 quarts = _____ cups
- 2 gallons = _____ pints
- $1\frac{1}{2}$ quarts = _____ cups
- $1\frac{1}{4}$ gallons = _____ pints
- $5\frac{1}{2}$ pints = _____ fluid ounces

For 7–8, complete each table.

7.

Quarts	Fluid Ounces
$1\frac{1}{2}$	
$2\frac{1}{2}$	
$3\frac{1}{2}$	
$4\frac{1}{2}$	
$5\frac{1}{2}$	
$6\frac{1}{2}$	

8.

Gallons	Pints
$1\frac{1}{2}$	
$2\frac{1}{2}$	
$3\frac{1}{2}$	
$4\frac{1}{2}$	
$5\frac{1}{2}$	
$6\frac{1}{2}$	

9. **Number Sense** Lauren hiked 16,900 feet in the morning and 14,850 feet in the afternoon. Estimate the total number of miles Lauren hiked that day. Explain.

10. How many minutes are in 3 hours? There are 60 minutes in one hour. Complete the table.

Hours	Minutes
1	
2	
3	

11. **Math and Science** How many pounds of eroded material does the Verde River carry past a given point each hour?

12. How many pounds of eroded material does the Verde River carry past a given point in $\frac{1}{4}$ of a day?



13. A car with a 20-gallon gas tank can go 25 miles on 1 gallon of gas. If the tank is full at the beginning of a 725-mile trip, how many times does the driver have to refill the gas tank?

14. **Higher Order Thinking** Janice needs 3 gallons of lemonade for a party. She has 4 quarts, 6 pints, and 4 cups of lemonade already made. How many cups of lemonade does Janice need? How many more cups does she need?

Common Core Assessment

15. Edgar has a birdbath that holds 2 gallons of water. He only wants to fill it $\frac{3}{4}$ full.

Part A

How much water, in gallons, should Edgar put in the birdbath? Explain.

Part B

How many 1-pint containers does it take to fill the birdbath? Explain.