# Volume and capacity word problems (mixed units)

Grade 4 Word Problems Worksheet

Hint: 16 ounces = 2 cups = 1 pint
2 pints = 1 quart
4 quarts = 1 gallon

1.  A container holds 2 L of a rubbing alcohol. Some of the alcohol from it was poured into three 600-ml spray containers until full. The rest of it was used to fill an empty plastic bottle. How much alcohol was there in the plastic bottle?

2.  There were 5 gallons of water and 12 plastic cups in the water dispenser at the office yesterday. This morning, there were 9 quarts of water left in the water dispenser. In quarts, how much water was consumed in yesterday?

3.  There was 4 L 200 ml of water in a container. After some of the water was used to fill the 2 empty water jugs A and B, there was 1,350 ml left in the container. Jug A can hold 1,800 ml. What is the capacity of water jug B? Express your answer in liters and milliliters.

4.  There are 2 L of oil in the container. After filling 5 bottles, with equal capacity, there is 350 ml left in the container. How much oil is there in each bottle?

5.  The capacity of a barrel is 9 gallons. The capacity of a small pail is 3 quarts. How many pails of water are needed to fill up the barrel?

6.  Arlene bought some chocolate ice cream and 2 gallons of mineral water from the convenience store. She ate 10 cups of ice cream and there are 3 quarts of it left. How much chocolate ice cream did she buy? Express your answer in cups.

## Answers

1.  600 x 3 =1,800 ml
    2,000 ml – 1,800 ml = 200 ml
    There was 200 ml of alcohol in the plastic bottle.

2.  5 gallons = 20 quarts
    20 – 9 = 11
    There were 11 quarts of water consumed yesterday.

3.  4 L 200 ml = 4,200 ml
    4,200 ml – 1,350 ml - 1,800 ml = 1,050 ml = 1 L 50 ml
    The capacity of water jug B is 1 L 50 ml.

4.  2 L = 2,000 ml
    2,000 ml – 350 ml = 1,650 ml
    1,650 ÷ 5 = 330 ml
    There is 330 ml of oil in each bottle.

5.  9 gallons = 36 quarts
    36 ÷ 3 = 12
    12 pails of water are needed to fill up the barrel.

6.  3 quarts = 12 cups
    10 + 12 = 22 cups
    Arlene bought 22 cups of chocolate ice cream.