

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. The capacity of a standard size bathtub is 100 gallons. Taking a 15-minute shower uses 30 gallons of water. How much water can be saved from taking a 15-minute shower instead of bath every day for a week?

2. The capacity of a tanker truck is 450 L and the capacity of the fuel tank of a small car is 50 L. How many small cars can a full tanker truck fill up?

Four full barrels of wine are in the cellar which is
 12 feet wide. If the capacity of each barrel is
 42 gallons, how much wine is there in total?





4. Capacity of a small swimming pool is 860 gallons. To clean the pool, it must be drained so that only 360 gallons of water are left. If it takes an hour for each 100 gallons to drain, how long does it take to drain the pool to the level required?

5. The capacity of the old fridge was 250 L. It broke down last week and Emily ordered a new fridge. If the new fridge has 160 L of extra capacity, what is the capacity of the new fridge?

6. A sink holds 10 L of water. The tap can fill up the sink with 1,500 ml of water every minute. The drain of the sink can drain away 1,300 ml of water every minute. Will the sink overflow if the tap is on for a long time and the sink is unplugged? Bonus question: how long before the sink is full?



Answers

- 100 30 = 70
 70 gallons of water can be saved each day.
 In a week 7 x 70 = 490 gallons of water can be saved.
- 2. $450 \div 50 = 9$ A full tanker truck can fill up 9 small cars.
- 3. $42 \times 4 = 168$ There is 168 gallons of wine in the cellar.
- 4. 860 360 = 500
 500 gallons of water must be drained from the pool.
 500 ÷ 100 = 5
 It will take 5 hours to drain the pool to the level required.
- 5. 250 + 160 = 410Th capacity of the new fridge is 410 L.
- 6. 1,500 > 1,300

The tap fills the sink up quicker than it can drain, so the sink will overflow if the tap is on for a long time.

Bonus question:

Each minute, the tap adds 1,500 ml and the drain drains 1,300 ml. 1,500 - 1,300 = 200 ml So, each minute an additional 200 ml of water are added. The sink holds 10 L = 10,000 ml of water. $10,000 \div 200 = 50$ So, it takes 50 minutes to fill the sink when the drain is open.