

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?

3. 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?



Answers

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

$$1,500 - 1,300 = 200 \text{ ml}$$

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.