Capacity

In the previous class you filled up a 1 litre vessel with vessels of different capacity. From this we came to a conclusion.

1000 ml = 1 litre

Similarly 500 ml = $\frac{1}{2}$ litre

250 ml = $\frac{1}{4}$ litre (quarter litre)

Fill in the blanks:

2000 ml = ... litre

5000 ml = ... litre

3600 ml = ... litre .... ml.

4050 ml = ... litre .... ml.

Now can you tell how many litres are equal to 700 ml?

Let us think over this question-

$\because$ 1000 ml = 1 litre

$\therefore$ 1 ml = $\frac{1}{1000}$ litre = 0.001 litre

$\therefore$ 700 ml = $\frac{1}{1000} \times 700$ litre = $\frac{700}{1000}$ litre

= 0.700 litre

Similarly

$$5 \text{ ml} = \frac{5}{1000} \text{ litre} = 0.005 \text{ litre}$$

$$50 \text{ ml} = \frac{50}{1000} \text{ litre} = 0.050 \text{ litre}$$

$$500 \text{ ml} = \frac{500}{1000} \text{ litre} = 0.500 \text{ litre}$$

Fill in the blanks :-

1) 375 ml = ... litre
2) 125 ml = ... litre
3) 50 ml = ... litre
4) 20 ml = ... litre
5) 8 ml = ... litre
6) 2 ml = ... litre

Let us see how we can convert the measurement given in litre and ml to litres-

Example 1 : Change 3 litres 200 ml to litres

Solution : To write 3 litres 200 ml in litres we need to write 200 ml in litres

$$3 \text{ litres } 200 \text{ ml} = 3 \text{ litres} + 200 \text{ ml}$$

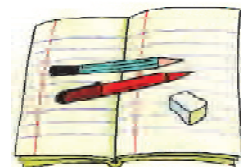$$= 3 \text{ litres} + \frac{200}{1000} \text{ litres}$$

$$= 3 \text{ litres} + 0.200 \text{ litres}$$

$$= 3.200 \text{ litres}$$

Hence, 3 litre 200 ml = 3.200 litres

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Exercise

Change the given to millilitres-

1.   8 litres

2.   7 litres 250 ml

3.   12 litres 500 ml

4.   6 litres 50 ml

5.   9 litres 8 ml

6.   5 litres 750 ml

7.   11 litres 7 ml

Change the given to litres-

8.   5750 ml

9.   12050 ml

10.   6005 ml

11.   15600 ml

12.   900 ml

Solve-

13.   Add 5.750 litre and 2.500 litre.

14.   Subtract 8.750 litre from 12.250 litre.

15.   Multiply 2.250 litre by 4..

16.   Divide 8.500 by 5.

Example 2 : If one vessel can hold 2.750 litre of water how much water will 5 such vessels hold?

Solution : Quantity of water in 1 vessel $=$ 2.750 litre

$\therefore$ Quantity of water in 5 vessels $=$ 2.750×5 litre

$=$ 2.750

$=$ $\dfrac{\times\ \ 5}{13.750}$

$=$ 13.750 litres.

Hence 5 vessels can hold 13.750 litre of water

Example 3 : How many bottles can be filled each of capacity 225 ml with 45 litres of medicine?

Solution : 1 litre = 1000 ml

$\therefore$ 4.5 litre $= 4.5 \times 1000$ ml

$= 4500$ ml

As 225 ml can be filled in 1 bottle

$\therefore$ 1 ml can be filled in $\dfrac{1}{225}$ bottle

$\therefore$ 4500 ml can be filled in $\dfrac{1}{225} \times 4500$ bottles

$= \dfrac{4500}{225}$ bottle

$= 20$ bottles

Hence 4.5 litres of medicine can be filled in 20 bottles each of capacity 225 ml.

Statement Sums

1. A milkman gave 1 litre 500 ml of milk to one customer and 1 litre milk to another customer. How much litres of milk did he give?

2. A kettle has 2 litre of tea. 500 ml tea was consumed so how much tea is left in the kettle?

3. Mohan drinks 250 ml of milk daily. How much milk in litres would be consumed in 4 days?

4. If 1 litre juice was divided equally among 5 people, how many litres would each person get?

5. Rajesh bought 2.250 litres of Soyabean oil, 3 litres of mustard oil and 500 ml of coconut oil from a shop. How many litres of oil did he buy in all?

6. A box has 1.6 litres of milk. How many mugs can be filled with this quantity if the capacity of each mug is 200 ml?

7. One drum can hold 25 litres of water. How many litres of water can be filled in 7 such drums?

8. A shopkeeper has a drum with 15 litres of oil. He sold 3.250 litre, 5 litre and 2.300 litre oil to the three customers So, how much oil is left in the drum?

9. One bucket can hold 27 mugs of water. If the capacity of one mug is 300 ml, what is the capacity of the bucket?

10. A water tanker can hold 6000 litres of water. If it fills tanks of capacity 800 litres and 400 litres respectively in this order, How many of each type of tanks can be filled? (**Hint -** Subtract 800 and 400 from 6000 one after the other.)

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