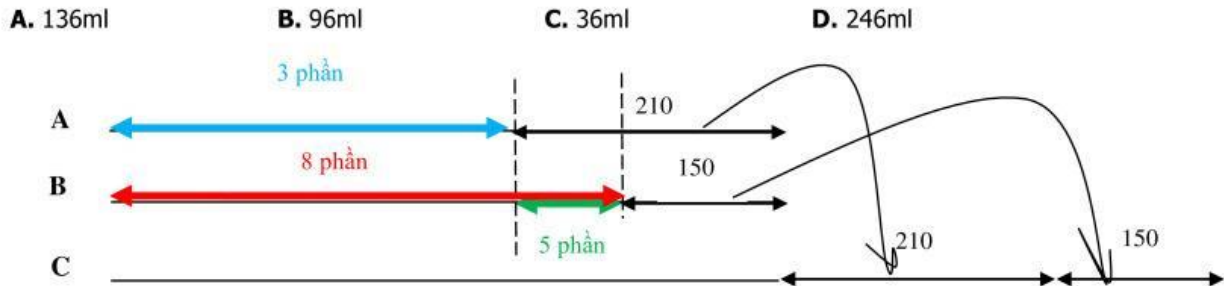


BÀI TOÁN TỈ LỆ

SAMPLE:

There were 3 glasses containing the same volume of liquid. Mr Lee poured 210 ml of the liquid from Glass A into Glass C, and 150 ml of the liquid from Glass B into Glass C. In the end, the ratio of the volume of liquid in Glass A to the volume of liquid in Glass B was 3:8. What was the final volume of liquid in Glass A?



The difference between the rest liquid in Glass B and Glass A after pouring the liquid into Glass C:

$$210 - 150 = 60 \text{ ml}$$

The difference in the ratio of the volume of liquid in Glass A to the volume of liquid in Glass B: $8 - 3 = 5$ portions

60 ml equals 5 portions \rightarrow 1 portion equal 12 ml of liquid

- \rightarrow The final volume of liquid in Glass A = $12 \times 3 = 36$ ml
- \rightarrow The final volume of liquid in Glass B = $12 \times 8 = 96$ ml
- \rightarrow The first volume of liquid in each glass at the beginning = $96 + 150 = 36 + 210 = 246$ ml
- \rightarrow The final volume of liquid in Glass C = $246 + 210 + 150 = 606$ ml

EXERCISE 1:

There were 3 bottles containing the same volume of juice. Sarah poured 280 ml of the juice from Bottle A into Bottle C, and 140 ml of the juice from Bottle B into Bottle C. In the end, the ratio of the volume of juice in Bottle A to the volume of juice in Bottle B was 2:9. What was the final volume of juice in Bottle A?

- A. 40ml B. 740ml C. 180ml D. 320ml

EXERCISE 2:

There were 3 jugs containing the same volume of milk. Harry poured 50 ml of the milk from Jug 1 into Jug 3, and 150 ml of the milk from Jug 2 into Jug 3. In the end, the ratio of the volume of milk in Jug 1 to the volume of milk in Jug 2 was 5:3. What was the final volume of milk in Jug 3?

- A. 50ml B. 500ml C. 250ml D. 150ml

EXERCISE 3:

There were 3 tanks containing the same volume of water. Harry poured 90 ml of the water from tank A into tank C, and 240 ml of the milk from tank B into tank C. In the end, the ratio of the volume of water in tank A to the volume of water in tank B was 7:4. What was the final volume of water in tank B?

- A. 50ml B. 200ml C. 350ml D. 590ml

SAMPLE:

There are five equal glasses containing milk in the ratio 3 : 4 : 5 : 6 : 7. How many glasses are at least 50% full of milk if the total volume of milk in the glasses is 60% of the total volume of the glasses?

A. 2

B. 3

C. 4

D. 5

Let the capacity of each vessel be 10 litres.

The total quantity of milk = $10 \times 5 \times 60 / 100 = 30$ litres.

Let the individual vessels contain $3x$, $4x$, $5x$, $6x$, and $7x$ litres.

$$3x + 4x + 5x + 6x + 7x = 25x = 30$$

$$\rightarrow x = \frac{30}{25} = \frac{6}{5} = 1.2$$

Therefore, the vessels contain 3.6 litres, 4.8 litres, 6 litres, 7.2 litres and 8.4 litres, respectively.

50% of each vessel would be 5 litres.

Therefore, 3 vessels have more than 50% (that is 6 litres, 7.2 litres and 8.4 litres)

while 2 vessels have less than 50% milk (that is 3.6 litres and 4.8 litres) in them.

EXERCISE 1:

The quantity of milk in the 5 vessels are in the ratio 4:5:6:7:8. The total quantity of milk in the five vessels is equal to 75% of the total capacities of the 5 vessels. How many of the vessels are at least 64% full of milk?

A. 2

B. 3

C. 4

D. 5

EXERCISE 2:

Four glasses of water have their volumes in the ratio 3:4:5:6. The total quantity of water in the four glasses equals three quarters of the total volume of the four glasses. How many of the glasses are at least half full of water?

A. 4

B. 3

C. 2

D. 1

EXERCISE 3:

Three containers of water have their volumes in the ratio 3:4:5. The total quantity of water in the three containers equals three-fifth of the total volume of the three containers. How many of the containers are at least half full of water?

A. 0

B. 1

C. 2

D. 3