



# MODUL AJAR

# RATIO

**Learning objectives**  
**Simplify two units**  
**into three units**

**Rules of students:**  
**Fill in according to the**  
**instructions.**

# PROBLEM ORIENTATION

Simplify two units into three units

Helping me make sense of a current difficulty

**Problem:** The ratio of Andi's weight to Budi's weight is 5 : 4, while the ratio of Budi's weight to Citra's weight is 6 : 5. Determine the ratio of Andi's weight : Budi's weight : Citra's weight.



## STEP 1

**Write both comparisons**

- Andi : Budi = 5 : 4
- Budi : Citra = 6 : 5

## STEP 3:

**Adjust the two ratios so that Budi = 12**

◆ Change the first ratio (5 : 4)  
Initial Budi = 4 → becomes 12 (times 3)  
So Andi is also multiplied by 3:  
Andi =  $5 \times 3 = 15$   
Budi =  $4 \times 3 = 12$   
New comparison:  
Andi : Budi = 15 : 12

◆ Change the second ratio (6 : 5)  
Initial Budi = 6 → becomes 12 (times 2)  
So the image is also multiplied by 2:  
• Budi =  $6 \times 2 = 12$   
• Image =  $5 \times 2 = 10$   
New comparison:  
Budi : Citra = 12 : 10

## STEP 2

**Equalize the value of the "Budi" section in both comparisons**

In the first comparison, Budi's share = 4  
In the second comparison, Budi's share = 6  
To equate, find the LCM (Least Common Multiple) of 4 and 6.

**LCM of 4 and 6 = 12**

## STEP4:

**Combine into three comparisons**

Now I have:

Andi = 15

Budi = 12

Image = 10

For:

✓ Andi : Budi : Citra = 15 : 12 : 10





# PROBLEM ORIENTATION

Simplify two units into three units

Helping me make sense of a current difficulty

**Problem:** The ratio of Rafi's study time to Danu's study time is 2 : 3, while the ratio of Danu's study time to Yuni's study time is 3 : 4. Determine the ratio of Rafi's study time : Danu's study time : Yuni's study time.



## STEP 1

**Write both comparisons**

- Rafi : Danu = 3 : 8
- Danu : Yuni = 5 : 7

## STEP 3:

**Combine into a three-part ratio**

◆ Ratio 1 (3 : 8)

To make 8 → 40, multiply by 5:

- Rafi =  $3 \times 5 = 15$
- Danu =  $8 \times 5 = 40$

New ratio: 15 : 40

◆ Ratio 2 (5 : 7)

To make 5 → 40, multiply by 8:

- Danu =  $5 \times 8 = 40$
- Yuni =  $7 \times 8 = 56$

New ratio: 40 : 56

## STEP 2

**Make the "Danu" values the same**

In the two ratios:

- Danu = 8
- Danu = 5

To combine the ratios, the value for Danu must be equal. Find the LCM (Least Common Multiple) of 8 and 5 is 40

## STEP4:

**Combine the three values**

Now I have:

- Rafi = 15
- Danu = 40
- Yuni = 56

So the combined ratio is:

★ Rafi : Danu : Yuni = 15 : 40 : 56





# CONCLUSION



After you have identified the problems, could you provide a summary of how to convert two ratios into three ratios?

Answer :

Which part of the material makes sense to you?

and Why ?

Do you have any questions?