Using **ratio, proportional parts**, and **total share** in **disaster management** is essential for **fair distribution, resource planning**, and **team organization**. These math concepts help decision-makers divide supplies, duties, and space **equitably and efficiently** in emergencies.

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## ◆ 1. **Ratio in Disaster Management**

### ◆ **Use: Comparing quantities, allocating resources, or dividing teams.**

### ✅ **Example:**

A disaster response team needs to divide **volunteers** into **medical**, **security**, and **logistics** teams in the ratio **2:3:5**.

- Total volunteers = 100

- Total parts = 2 + 3 + 5 = 10 parts

- Medical team = $\frac{2}{10} \times 100 = 20$

- Security team = $\frac{3}{10} \times 100 = 30$

- Logistics team = $\frac{5}{10} \times 100 = 50$

→ This ensures all teams are staffed **according to needs**.

## ◆ 2. **Proportional Parts**

◆ **Use:** Dividing limited resources fairly based on population or need.

✅ **Example:**

There are **3 shelters** with 80, 120, and 200 people.

Total = **400 people**

Available rice = **2,000 kg**

**Each shelter gets rice based on its population:**

- Shelter 1 (80): $\frac{80}{400} \times 2000 = 400$ kg

- Shelter 2 (120): $\frac{120}{400} \times 2000 = 600$ kg

- Shelter 3 (200): $\frac{200}{400} \times 2000 = 1000$ kg

→ Each shelter receives rice **proportional to its population**.

# ◆ 3. Total Share

◆ **Use:** Finding how much one group gets out of the total.

## ✅ **Example:**

A donor gives **$5,000** to be shared among 4 teams in the ratio **1:2:2:5**

- Total parts = 1 + 2 + 2 + 5 = **10 parts**

- Share per part = $\frac{5000}{10} = 500$

- Team 1 gets: $1 \times 500 = 500$

- Team 2 gets: $2 \times 500 = 1000$

- Team 3 gets: $2 \times 500 = 1000$

- Team 4 gets: $5 \times 500 = 2500$

➡ This helps ensure **fair and justified financial distribution**.

## ✅ Summary Table:

| Concept | Scenario | Example | Result |
|---|---|---|---|
| **Ratio** | Team division | 2:3:5 ratio for 100 people | 20, 30, 50 |
| **Proportional Parts** | Food allocation | 2000 kg for 3 shelters | 400, 600, 1000 kg |
| **Total Share** | Funding support | $5000 in 1:2:2:5 ratio | $500, $1000, $1000, $2500 |

## 🧠 Why Use These Concepts in Disaster Management?

- ✅ Ensures **fair distribution** of aid and resources

- ✅ Helps with **scalable planning** based on population size

- ✅ Makes budgeting and **team allocation efficient**