Rounding off in **disaster management** for simplifying data, making fast decisions, and ensuring clear communication, especially when dealing with large numbers, quick estimates, and urgent reports.

Here's how rounding is used in disaster management, along with **examples** for each type:

◆ 1. Rounding to the Nearest 10

◆ Use: For quick estimations of people, supplies, or resources.

✅ **Example:**
A shelter has **247 people**.

- Round to the nearest **10**: **250 people**
  ➞ Used for ordering food or water quickly (e.g., 250 meals).

◆ 2. Rounding to the Nearest 100

◆ Use: When dealing with larger populations or quantities.

✅ **Example:**
An evacuation center registers **1,843 people**.

- Rounded to the nearest **100**: **1,800 people**
  ➞ Helps estimate the number of beds, transport buses, or blankets needed.

◆ 3. Rounding to the Nearest 1,000

◆ Use: For large-scale disaster impact data.

✅ **Example:**
A flood damages **47,629 houses**.

- Round to the nearest **1,000**: **48,000 houses**
  ➞ Used in national disaster reports or to request aid.

◆ 4. Rounding to Decimal Places

◆ Use: For measurements like rainfall, water depth, or temperature.

✅ **Example:**
Rainfall measured = **123.678 mm**

- Round to **1 decimal place**: **123.7 mm**
- Round to **2 decimal places**: **123.68 mm**

➞ Useful for weather reports or flood warnings.

◆ 5. Rounding to the Nearest Whole Number

◆ Use: For time estimates, temperature, or costs.

✅ **Example:**
A drone battery lasts **6.47 hours**

- Rounded to nearest **whole number**: **6 hours**

➞ Used for scheduling drone flights during search-and-rescue.

◆ 6. Rounding to Significant Figures

◆ Use: To simplify very large or very small numbers without losing meaning.

✅ **Example 1 – Large Number:**
Cost of damage = **$872,653,129**

- Rounded to **2 significant figures**: **$870,000,000**

✅ **Example 2 – Small Number:**
Viral contamination in water = **0.000482 mg/L**

- Rounded to **2 significant figures**: **0.00048 mg/L**

➞ Helps in public reports or scientific analysis.

✅ Summary Table:

Situation	Math Concept	Example	Rounded Value	Use
Shelter headcount	Nearest 10	247	250	Fast supply estimation
Evacuee count	Nearest 100	1,843	1,800	Planning logistics
Houses damaged	Nearest 1,000	47,629	48,000	National reports
Rainfall level	Decimal place	123.678 mm	123.7 mm	Flood risk alert
Battery life	Whole number	6.47 hrs	6 hrs	Rescue timing
Damage cost	Significant figures	$872,653,129	$870 million	Budgeting/Reporting
Contaminant level	Significant figures	0.000482	0.00048	Safe water analysis

Rounding helps responders:

- **Save time**
- **Communicate clearly**
- **Avoid unnecessary precision**
- **Make rapid decisions**