# Problem 6 – Three Brothers

Three brothers get a **sack of presents**. Each present has a **price**. Brothers want to **split the presents fairly** so that each brother gets **presents of equal price**. Sometimes this is possible, sometimes not. For example if the presents have prices **{1, 3, 4, 5, 3, 2}**, a **fair split** is possible: **1 + 5 = 3 + 3 = 2 + 4**. If the presents have prices **{1, 3, 5, 3}**, there is **no fair split**. Write a program to check whether a fair split exists for several sacks of presents.

## Input

- The input is read from the console. The **first line** holds an integer **n** – the number of sacks to be checked.
- Each of the **next n lines** holds the **prices of presents** in each sack, separated by space.

## Output

- For each sack of presents print at the console a single line holding "**Yes**" or "**No**".
- Print "**Yes**" if a fair split is possible or "**No**" if no fair split exists.

## Constraints

- The number of input sets **n** is **integer** in range **[1…10]**.
- The **count of numbers** in each input set is integer in range **[1…50]**.
- **Prices** in each set are integers in range **[1…20]**.
- Time limit: **200 ms**. Allowed memory: **16 MB**.

## Sample Input and Output

| Input | Output | Comments |
|---|---|---|
| 3<br>1 3 4 5 3 2<br>1 2 3<br>3 3 3 | Yes<br>No<br>Yes | 1+5 = 4+2 = 3+3<br>1 ≠ 2 ≠ 3<br>3 = 3 = 3 |

| Input | Output | Comments |
|---|---|---|
| 4<br>4 2 5 8 3<br>5 1 7 4 3 6 1<br>4 5 2 5 3 4 2 5<br>7 9 3 8 3 | No<br>Yes<br>Yes<br>No | 2+5 = 4+3 ≠ 8<br>3+6 = 7+1+1 = 4+5<br>5+3+2 = 4+4+2 = 5+5<br>7+3 ≠ 8+3 ≠ 9 |

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