
Description

For integers $a \leq b$ we let $[a, b]$ denote the *interval* consisting of all integers between a and b (including both a and b).

Given two intervals, do they have any values in common?

Input

The input will be a single line consisting of four space-separated integers low_1 , $high_1$, low_2 , $high_2$. You are guaranteed that $low_1 \leq high_1$, that $low_2 \leq high_2$, and that all values lie in the interval $[-10^9, 10^9]$.

Output

Your program should output a single line containing the word `disjoint` if $[low_1, high_1]$ and $[low_2, high_2]$ share no values in common, or the single word `intersect` if they share at least one value in common.

Sample Input

```
1 2 3 4
```

Sample Output

```
disjoint
```

Explanation: No values are common between $[1, 2]$ and $[3, 4]$.

Sample Input

```
1 4 2 3
```

Sample Output

```
intersect
```

Explanation: Every value in $[2, 3]$ is also in $[1, 4]$.

Sample Input

```
1 3 2 4
```

Sample Output

```
intersect
```

Explanation: $[1, 3]$ and $[2, 4]$ share 2 in common (also 3).

Sample Input

```
1 2 2 2
```

Sample Output

```
intersect
```

Explanation: $[1, 2]$ and $[2, 2]$ share 2 in common.