


# 섬 연결하기

# Index	42861
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## References

<https://school.programmers.co.kr/learn/courses/30/lessons/42861>

### References

#### 1. Kruskal Algorithm

## 1. Kruskal Algorithm

```
def solution(n, costs):
    group = dict()
    new_group = 0
    num_bridge = 0
    result = 0

    costs = sorted(costs, reverse=True, key=lambda x: (x[2], x[0], x[1]))
    while costs and num_bridge < n - 1:
        while costs and group.get(costs[-1][0], -1) == group.get(costs[-1][1], -2):
            costs.pop()
        x, y, cost = costs.pop()
        num_bridge += 1
        result += cost

        if group.get(x, -1) >= 0 and group.get(y, -1) >= 0:
            group_x = group.get(x, -1)
            group_y = group.get(y, -1)
            for node in group:
                if group[node] == group_y:
                    group[node] = group_x
            elif group.get(x, -1) >= 0:
```

```
        group[y] = group.get(x, -1)
    elif group.get(y, -1) >= 0:
        group[x] = group.get(y, -1)
    else:
        group[x] = new_group
        group[y] = new_group
        new_group += 1

return result
```