

Problem A. Chooser

Problem Statement

PROBLEM STATEMENT

When putting together a problem set, a writer must keep in mind the difficulty and length of a problem. A good problem set is one with an easy, a middle, and a hard problem, but doesn't take too much or too little time to complete.

You will be given an input of three `int[]`. The first `int[]` consists of easy problem times, the second consists of middle problem times, and the third consists of hard problem times. Return the number of legal problem set combinations, where a legal set contains exactly 1 easy, 1 middle and 1 hard problem, and the total time is between 60 and 75 inclusive.

DEFINITION

Class name: Chooser

Method name: numSets

Parameters: `int[], int[], int[]`

Returns: `int`

The method signature is:

```
int numSets(int[] easy, int[] middle, int[] hard)
```

Be sure your method is public.

TopCoder will ensure the following:

*Each `int[]` will contain between 0 and 10 elements, inclusive.

*Each element of easy will be an int between 5 and 15, inclusive.

*Each element of middle will be an int between 15 and 45, inclusive.

*Each element of hard will be an int between 30 and 55, inclusive.

EXAMPLES

```
{5,10,15}
```

```
{15,25}
```

```
{45}
```

There are $3 \times 2 \times 1 = 6$ possible sets. However, since $10 + 25 + 45 = 80$ and $15 + 25 + 45 = 85$, two of the sets are illegal, so the method returns 4.

```
(5, 10, 15)
```

```
{5,5,5}
```

```
{15,15,15}
```

```
{45,45,45}
```

There are $3*3*3=27$ possible sets, all legal. The return value is 27.

```
{5,5,5}
```

```
{15,15,15}
```

```
{45,45,35}
```

There are 27 possible sets again, but for this input any set with the 35 minute hard problem is too short. Therefore there are only $3*3*2=18$ legal sets, and the return value is 18.

```
{}
```

```
{15,25}
```

```
{30,35,40}
```

Since there are no easy problems, there are no legal problem sets. The return value is 0.

Definition

Class: Chooser

Method: numSets

Parameters: int[], int[], int[]

Returns: int

Method signature: int numSets(int[] param0, int[] param1, int[] param2)

(be sure your method is public)

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