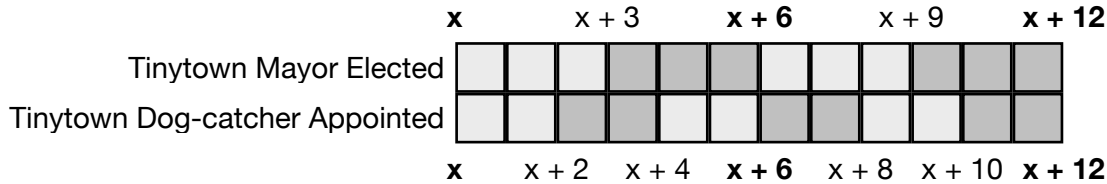


Terms of Office

In TINYTOWN, the mayor is elected every 3 years, and the dog-catcher is appointed every 2 years. At the start of the current year (year X) the mayor was elected and the dog-catcher was appointed. So, the next twelve years of elections and appointments occurred like this:



In other words, if year X is 2018, the current year, then a mayor was elected at the start of **2018**, 2021, **2024**, 2027, and **2030**. The dog-catcher would have been appointed in **2018**, 2020, 2022, **2024**, 2026, 2028, and **2030**. **Both positions changed in years 2018, 2024, and 2030**. So, across 12 years, both positions changed 3 times, for 25% of all years between 2018 and 2030, inclusive. In TINYTOWN, having both the mayor and the dog-catcher change occurs fairly often.

In Bigtropolis, things are very different. In Bigtropolis, the mayor is elected every 4 years, the treasurer is appointed every 2 years, the chief programmer is elected every 3 years and the dog-catcher is replaced every 5 years.

In Bigtropolis, just like in TINYTOWN, all positions changed to a new person at the start of year X.

Write a program that accepts input for a year X and the future year Y and lists the years between X and Y, inclusive, when all positions change. Your program will also output the percentage of all years between X and Y, inclusive, when all positions change.

Input for years will always be a non-negative integer. If invalid input is provided, the prompt should be repeated. If the current year provided is greater than the future year, inform the user that the values provided have been swapped.

Sample Sessions (output in **bold**, input is regular text)

```
Welcome to the Bigtropolis Terms of Office Analyser!
Enter the current year (year X):
2018
Enter the future year (year Y):
2100
All positions change in 2018
All positions change in 2078
Between 2018 and 2100, all positions changed at the start of 2.4% of years.
```

```
Welcome to the Bigtropolis Terms of Office Analyser!
Enter the current year (year X):
300
Enter the future year (year Y):
199
Years given have been swapped since the current year provided was greater than the future year.
All positions change in year 199
All positions change in year 259
Between 199 and 300, all positions changed at the start of 2.0% of years.
```