

QUIZ 1

COMP9021 PRINCIPLES OF PROGRAMMING

```
$ python3 quiz_1.py
Enter two integers: 0 4
```

The generated mapping is:
 {3: 1}

The mappings's so-called "keys" make up a set whose number of elements is 1.

The list of integers between 1 and 4 that are not keys of the mapping is:
 [1, 2, 4]

Represented as a list, the mapping is:
 [None, None, None, 1, None]

The one-to-one part of the mapping is:
 {3: 1}

```
$ python3 quiz_1.py
Enter two integers: 0 8
```

The generated mapping is:
 {2: 4, 3: 8, 4: 7, 5: 7}

The mappings's so-called "keys" make up a set whose number of elements is 4.

The list of integers between 1 and 8 that are not keys of the mapping is:
 [1, 6, 7, 8]

Represented as a list, the mapping is:
 [None, None, 4, 8, 7, 7, None, None, None]

The one-to-one part of the mapping is:
 {2: 4, 3: 8}

```
$ python3 quiz_1.py
```

```
Enter two integers: 10 10
```

The generated mapping is:

```
{1: 8, 2: 8, 3: 8, 4: 10, 7: 10, 8: 9}
```

The mappings's so-called "keys" make up a set whose number of elements is 6.

The list of integers between 1 and 10 that are not keys of the mapping is:

```
[5, 6, 9, 10]
```

Represented as a list, the mapping is:

```
[None, 8, 8, 8, 10, None, None, 10, 9, None, None]
```

The one-to-one part of the mapping is:

```
{8: 9}
```

```
$ python3 quiz_1.py
```

```
Enter two integers: 5 15
```

The generated mapping is:

```
{1: 10, 3: 7, 8: 13, 9: 10, 10: 7, 11: 15, 12: 3, 13: 2}
```

The mappings's so-called "keys" make up a set whose number of elements is 8.

The list of integers between 1 and 15 that are not keys of the mapping is:

```
[2, 4, 5, 6, 7, 14, 15]
```

Represented as a list, the mapping is:

```
[None, 10, None, 7, None, None, None, None, 13, 10, 7, 15, 3, 2, None, None]
```

The one-to-one part of the mapping is:

```
{8: 13, 11: 15, 12: 3, 13: 2}
```

```
$ python3 quiz_1.py
```

```
Enter two integers: 23 16
```

The generated mapping is:

```
{1: 13, 2: 3, 3: 9, 9: 12, 10: 12, 12: 13, 13: 15, 15: 16, 16: 13}
```

The mappings's so-called "keys" make up a set whose number of elements is 9.

The list of integers between 1 and 16 that are not keys of the mapping is:

```
[4, 5, 6, 7, 8, 11, 14]
```

Represented as a list, the mapping is:

```
[None, 13, 3, 9, None, None, None, None, 12, 12, None, 13, 15, None, 16, 13]
```

The one-to-one part of the mapping is:

```
{2: 3, 3: 9, 13: 15, 15: 16}
```