

Do the following exercises on lined paper and staple that paper to this worksheet when submitting it. Please rewrite the method header of each exercise onto the attached paper.

1. Write a static method named `convert` that is passed a two-dimensional array of integers named `numbers` and returns a two-dimensional array has a length of two that contains the integers from `numbers` but stores them in such a way that they were placed there in row-major order. For example if the following set of integers is stored in `numbers`

```
{0, 1, 2, 3, 4, 5, 6, 7}
```

then the following two-dimensional array would be returned

```
{{0, 1, 2, 3}, {4, 5, 6, 7}};
```

```
public static int[][] convert(int[] numbers)
{
```

2. Do #1 but in such a way that the number of columns in the returned two-dimensional array is two and the placement of the values from `numbers` is done in column-major order. For example if the following set of integers is stored in `numbers`

```
{0, 1, 2, 3, 4, 5, 6, 7}
```

then the following two-dimensional array would be returned

```
{{0, 2, 4, 6}, {1, 3, 5, 7}}
```

```
public static int[][] convert(int[] numbers)
{
```

3. On the back of this paper, write a static method named `translate` that is passed a two-dimensional array of integers named `numbers`. The method must return a two-dimensional array of integers that is the translation of `numbers`. For example, if `numbers` is

```
12   3   5
1    -8  9
20   15  9
0    18  -2
```

then the following array would be returned:

```
12   1   20   0
3    -8  15   18
5    9   9    -2
```

```
public static int[][] translate(int[][] numbers)
{
```