

```

    }
}

```

You can test this with the `testMirrorTemple` method in `PictureTester`.

How many times was `leftPixel = pixels[row][col];` executed? The formula for the number of times a nested loop executes is the number of times the *outer loop* executes multiplied by the number of times the *inner loop* executes. The outer loop is the one looping through the rows, because it is outside the other loop. The inner loop is the one looping through the columns, because it is inside the row loop.

How many times does the outer loop execute? The outer loop starts with `row` equal to 27 and ends when it reaches 97, so the last time through the loop `row` is 96. To calculate the number of times a loop executes, subtract the starting value from the ending value and add one. The outer loop executes $96 - 27 + 1$ times, which equals 70 times. The inner loop starts with `col` equal to 13 and ends when it reaches 276, so, the last time through the loop, `col` will be 275. It executes $275 - 13 + 1$ times, which equals 263 times. The total is $70 * 263$, which equals 18,410.

Questions

- How many times would the body of this nested `for` loop execute? 90

```

for (int row = 7; row < 17; row++)
    for (int col = 6; col < 15; col++)

```
- How many times would the body of this nested `for` loop execute? 112

```

for (int row = 5; row <= 11; row++)
    for (int col = 3; col <= 18; col++)

```

Exercises

- Check the calculation of the number of times the body of the nested loop executes by adding an integer `count` variable to the `mirrorTemple` method that starts out at 0 and increments inside the body of the loop. Print the value of `count` after the nested loop ends.
- Write the method `mirrorArms` to mirror the arms on the snowman ("snowman.jpg") to make a snowman with 4 arms. Write a class (static) test method in `PictureTester` to test this new method and call it in the `main` method.
- Write the method `mirrorGull` to mirror the seagull ("seagull.jpg") to the right so that there are two seagulls on the beach near each other. Write a class (static) test method in `PictureTester` to test this new method and call it in the `main` method.