You are to write an Engineering class to compute the areas of certain 2 dimensional objects.

All objects will have a length, and some will also have a width.

You will need two constructors, one to handle objects such as a circle that only have a length (radius), and another to handle objects like rectangles that have a width and length.

The constructor for circles will receive an integer value that is used to initialize the length, and the width will be set to 0.

The other constructor will receive two integers for initializing width and height.

You will need two compute area methods one called circle that computes the area of a circle. (3.14*length*length) .

The other will compute and return the area of a rectangle (width * height).

If an instance of Engineering that only has one instance field initialized calls rect the method should print out an error message. You will also need one more method for growing or shrinking the length variable, call it changeLength. The method changeLength will receive an integer that will be used for growing or shrinking the length. If it's shrinking the number being sent in will be negative so addition is all you need. Here is a sample driver to instantiate the class and call the methods:

```
Engineering r = new Engineering(6, 7);

Engineering c = new Engineering(7);

c.changeLength(4);

int answer = c.circle();

r.changeLength(-5);

int secondAnswer = r.rect();

int thirdAnswer = c.rect(); //this will print out an error
```

Now write your own driver to test all the methods your created…….find errors.

Make sure the TA checks you off at the end of lab class.