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Solution to exercise 5.1.3

```
<math>R = \text{input}(\text{"Give } R : \text{"});
```

```
function p = polyarea(R,n)
```

```
p = n * 1/2 * R^2 * sin(2*pi/n);
```

```
endfunction
```

```
epsilon = 0.005; trueArea = pi*R^2;
```

```
n = 2; do
```

```
n = n+1;  
pa = polyarea(R,n);  
relError = abs((pa-trueArea)/trueArea);
```

```
until relError < epsilon; printf("For n=%d the relative error is %g\n", n, relError); </math>
```

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