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## Grader

### Grader

10.0/10.0 points (ungraded)

A regular polygon has n number of sides. Each side has length s.

- The area of a regular polygon is:  $\frac{0.25*n*s^2}{tan(\pi/n)}$
- The perimeter of a polygon is: length of the boundary of the polygon

Write a function called polysum that takes 2 arguments, n and s. This function should sum the area and square of the perimeter of the regular polygon. The function returns the sum, rounded to 4 decimal places.

#### Hint: What to import?

Which library should you be importing at the beginning of your code in order to call the tan function and to get the pi constant?

This is an optional exercise, but great for extra practice!

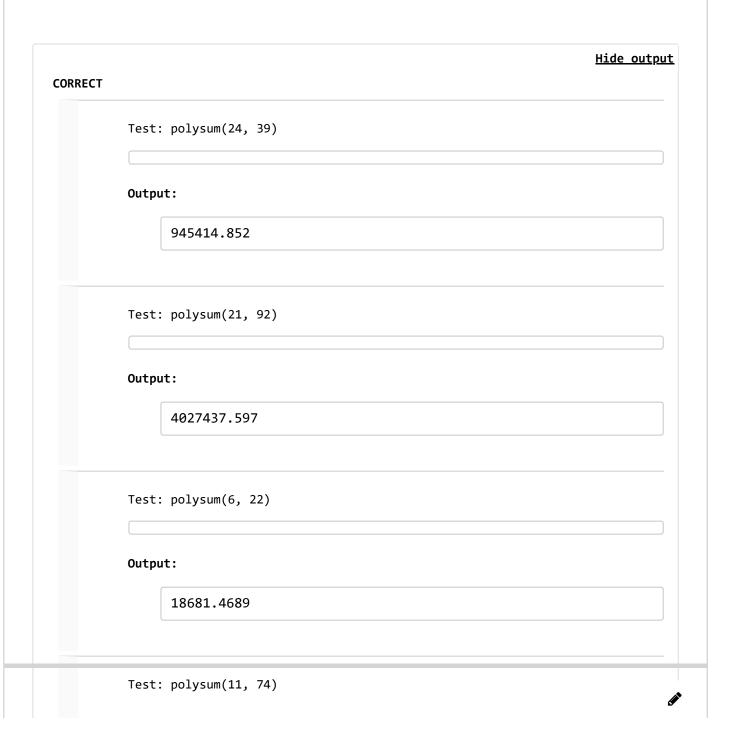
```
13
14
15 def area(n, s):
      """:arg:n = int, número de lados de um polígono;
16
17
                   s = float, tamanho de cada lado de um polígono regular
18
19
                   out: float (4 casas decimais), área de um polígono"""
20
      return (0.25 * n * s ** 2) / math.tan(math.pi / n)
```

```
21
22
23 def polysum(n, s):
      """:arg:n = int, número de lados de um polígono;
25
              s = float, tamanho de cada lado de um polígono regular
26
27
              out: float (4 casas decimais), a soma da área com o quadrado do ρε
28
      return round(area(n, s) + (perimetro(n, s)**2), 4)
```

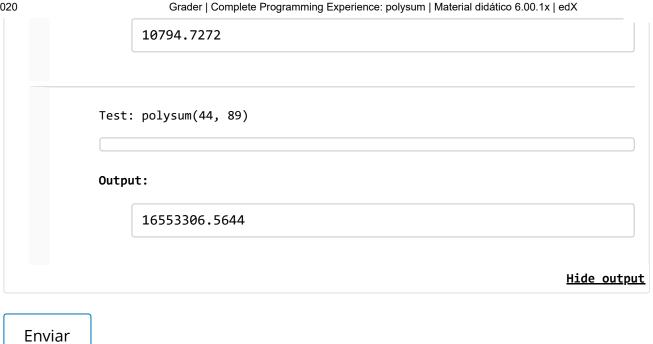
Press ESC then TAB or click outside of the code editor to exit

Correta

## Test results



	Output:
	713882.2441
	Test: polysum(77, 71)
	Output:
	32265187.6748
	Tost: nolysum(99 40)
	Test: polysum(88, 49)
	Output
	Output:
	20072326.6694
	Test: polysum(98, 58)
	Output:
	34877952.7381
	Test: polysum(86, 92)
	Output:
	67579057.2798
	Tests malvaum(FQ 2)
	Test: polysum(50, 2)
	Output:

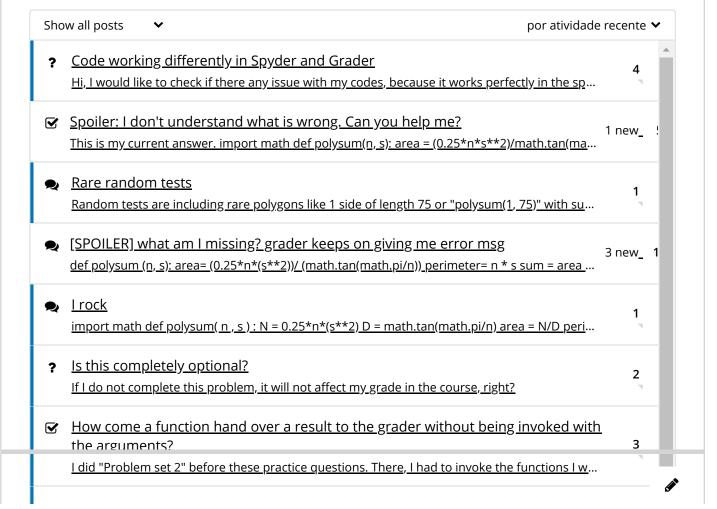


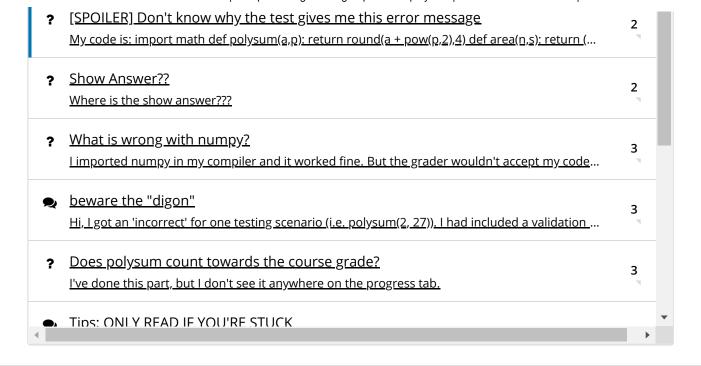
# polysum Grader

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