**Exercise:**

Calculate the regular polygon area with a side length and sides numbers.

**Regular Polygon Area:**

Area = side\_numbers \* ()

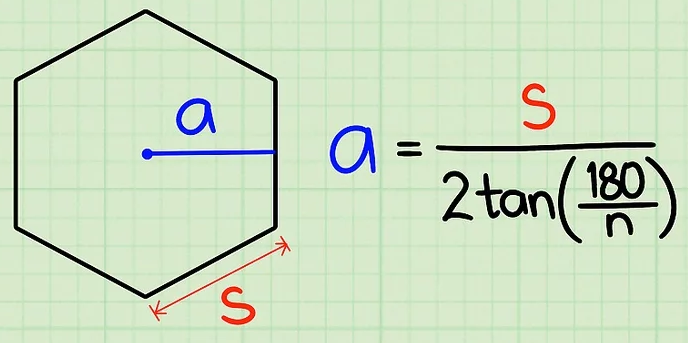
**Inputs:** side length; side numbers.

Where side\_length and side\_numbers € positive R.

**Outputs:** A positive number € R.

**Mathematic-logic Model:**

Calculate Apoteto:



Where:

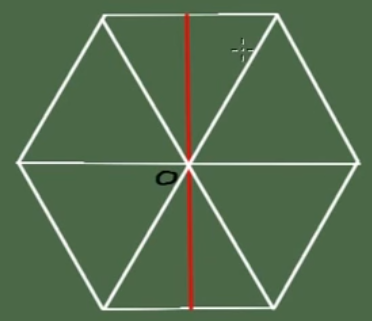
* a = apoteto
* s = side
* n = side numbers

Calculate Triangle Area:

Area = ()

Where:

* base = side
* height = apoteto



Area of Regular Polygon:

Area = side\_numbers \* ()

**Conditions:**

Ifside == 0 or side\_numbers ==0

Area of regular polygon is 0? So, it is not possible to calculate the area of regular polygon.

**Algorithm:**

Calculate\_Polygon\_Area (side, side\_numbers): polygon\_Area

1. Read side, side\_numbers
2. Apoteto = Calculate\_Apoteto (side, side\_numbers): Apoteto
3. Triangle\_Area = Calculate\_Triangle\_Area (side, Apoteto): Triangle\_Area
4. Polygon\_Area = Multiplication (side\_numbers, Triangle\_Area): polygon\_Area
5. Show Area (Polygon\_Area)

Calculate\_Apoteto (side, side\_numbers): Apoteto

1. Return ()

Calculate\_Triangle\_Area (side, Apoteto): Triangle\_Area

1. Return ())

Multiplication (num1, num2): polygon\_Area

1. Return (num1 \* num2)