

Algoritmo Para Cálculo de Áreas y Volúmenes

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**Tecnología en Análisis y Desarrollo de
Software.**

ADSO

Se abordaran el desarrollo de las evidencias en librosde jupyter notebook con python para los calculos con figuras geometricas solicitado.

Area y perimetro de Solidos

Area, Perimetro de Esfera

Volúmenes de Sólidos Regulares

Cubo

Volumen, formula:

$$V=L*L*L \text{ o } L^3$$

```
def volumenCubo(L):  
    return L * L * L
```

```
print(volumenCubo(5))
```

Volúmenes de Sólidos Regulares

```
<h3>Cubo</h3>  
<h4>Volumen</h4>  
  
<code>V=L*L*L o L3</code>
```

```
def volumenCubo(L):  
    return L * L * L  
  
print(volumenCubo(5))
```

[1] ✓ 0.0s

Python

... 125

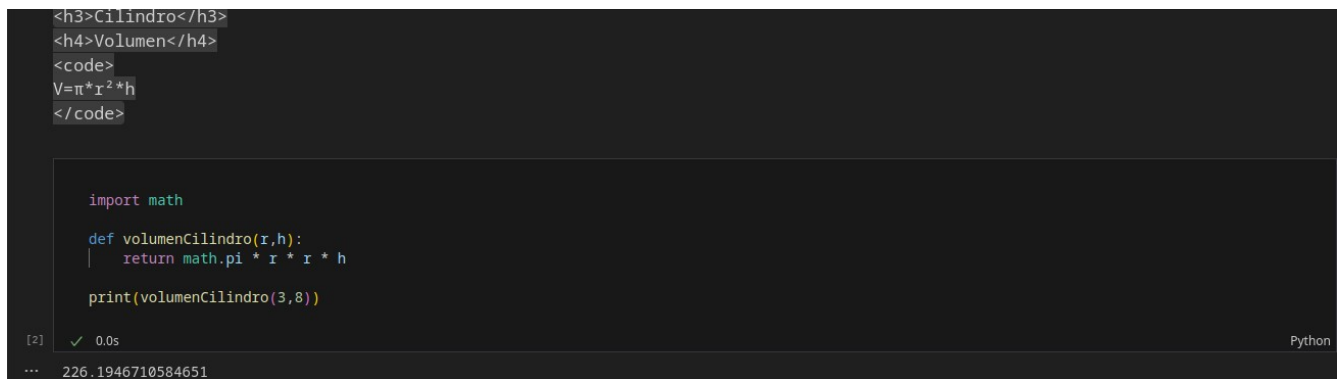
Volumen de Cilindro

$$V=\pi*r^2*h$$

```
import math

def volumenCilindro(r,h):
    return math.pi * r * r * h

print(volumenCilindro(3,8))
```



The screenshot shows a Jupyter Notebook interface. At the top, there are HTML headers: `<h3>Cilindro</h3>` and `<h4>Volumen</h4>`. Below these is a code block containing the formula `V=π*r²*h`. The main code cell contains the Python code for calculating the volume of a cylinder. The output of the cell is the numerical result 226.1946710584651.

```
<h3>Cilindro</h3>
<h4>Volumen</h4>
<code>
V=π*r²*h
</code>

import math

def volumenCilindro(r,h):
    return math.pi * r * r * h

print(volumenCilindro(3,8))

[2] ✓ 0.0s Python
... 226.1946710584651
```

Imagen

Volumen de Paralelepípedo

Formula:

$$V=L*A*H$$

```
def volumenParalelepipedo(L,A,H):
    return L * A * H

print(volumenParalelepipedo(8,6,4))
```

Volumen

$V = L * A * H$

```
def volumenParalelepipedo(L,A,H): return L * A * H  
print(volumenParalelepipedo(8,6,4))
```

Área Superficial

$As = 2 * (L * A + L * H + A * H)$

```
def areaSupParalelepipedo(L,A,H):  
    return 2 * (L*A + L*H + A*H)  
  
print(areaSupParalelepipedo(8,6,4))
```

✓ 0.0s

Python

208

Area y Perimetros de Figuras geometricas

Cuadrado

$area = L * L ;$

```
def square(x):  
    return x * x
```

`print (square(18))`

Area y Perimetros de Figuras geometricas

Cuadrado

$area = L * L ;$

```
def square(x):  
    return x * x  
  
print (square(18))
```

[*]

✓ 0.0s

Python

... 324

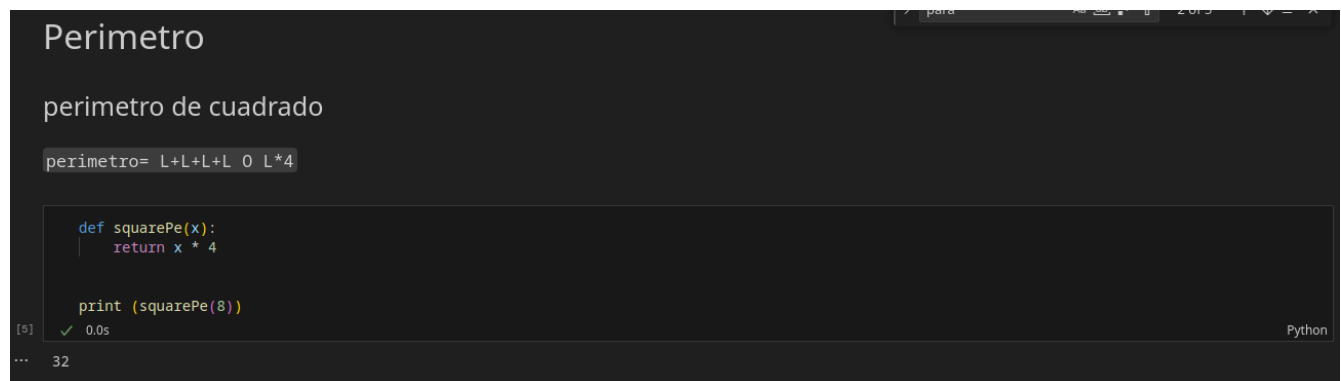
perimetro de cuadrado

Formula:

perimetro= L+L+L+L O $L*4$

```
def squarePe(x):  
    return x * 4
```

```
print (squarePe(8))
```



The screenshot shows a Jupyter Notebook interface. The title of the cell is "Perimetro". The text "perimetro de cuadrado" is written above the code. The code cell contains the following Python code:

```
perimetro= L+L+L+L O L*4  
  
def squarePe(x):  
    return x * 4  
  
print (squarePe(8))
```

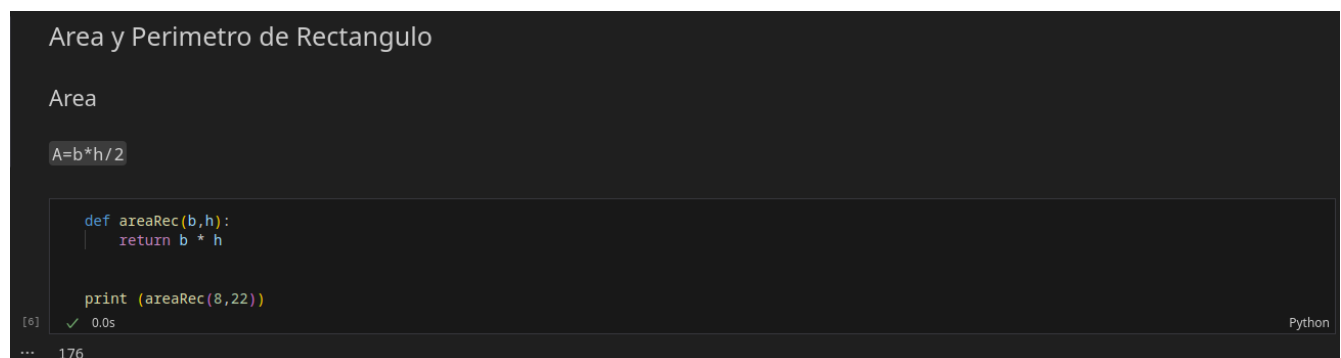
Below the code, the output is shown as a green checkmark, the text "[5]", and the execution time "0.0s". The word "Python" is visible in the bottom right corner of the cell.

Area y Perimetro de RectanguloArea

Formula: $A=b*h/2$

```
def areaRec(b,h):  
    return b * h
```

```
print (areaRec(8,22))
```



The screenshot shows a Jupyter Notebook interface. The title of the cell is "Area y Perimetro de Rectangulo". The text "Area" is written above the code. The code cell contains the following Python code:

```
A=b*h/2  
  
def areaRec(b,h):  
    return b * h  
  
print (areaRec(8,22))
```

Below the code, the output is shown as a green checkmark, the text "[6]", and the execution time "0.0s". The word "Python" is visible in the bottom right corner of the cell.

Perimetro Rectangulo

Formula:

$$P = b + b + h + h$$

$$P = b * 2 + h * 2$$

```
def perimRec(b,h):  
    return b * 2 + h * 2  
print (perimRec(8,22))
```

```
Perimetro Rectangulo  
  
P= b+b+h+h P=b*2+h*2  
  
def perimRec(b,h):  
    return b * 2 + h * 2  
  
print (perimRec(8,22))  
[5]  
Python  
60
```

Area y Perimetro de Triangulo

Formula:

$$A = b * h / 2$$

$$P = L + L + L \text{ o } L * 3$$

```
def areaTri(b,h):  
    return b * h / 2
```

```
print (areaRec(15,8))
```

```
Area y Perimetro de Triangulo  
  
Area  
  
A=b*h/2 P=L+L+L o L*3  
  
Empty markdown cell, double-click or press enter to edit.  
  
Empty markdown cell, double-click or press enter to edit.  
  
def areaTri(b,h):  
    return b * h / 2  
  
print (areaRec(15,8))  
[7] ✓ 0.0s  
Python  
120
```