

Evidencia de conocimiento:  
**Algoritmo para El Cálculo de Áreas y  
Volúmenes GA2-240201528-AA4-EV01.**

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Link de acceso:

<https://areasyvolumenes.w3spaces.com>

# Algoritmo utilizado:

```
1 import { Component, inject, OnInit } from '@angular/core';
2 import { FormBuilder, ReactiveFormsModule, Validators } from '@angular/forms';
3 import { RouterOutlet } from '@angular/router';
4 import { initFlowbite } from 'flowbite';
5
6 @Component({
7   selector: 'app-root',
8   standalone: true,
9   imports: [RouterOutlet, ReactiveFormsModule],
10  templateUrl: './app.component.html',
11  styleUrls: ['./app.component.css']
12 })
13 export class AppComponent implements OnInit {
14   title = 'areas_volumenes';
15   private formBuilder = inject(FormBuilder);
16   formTriangulo = this.formBuilder.nonNullable.group({
17     altura: ['', [Validators.required, Validators.pattern('[0-9]*$'), Validators.min(1)]],
18     base: ['', [Validators.required, Validators.pattern('[0-9]*$'), Validators.min(1)]]
19   });
20   formPrisma = this.formBuilder.nonNullable.group({
21     altura: ['', [Validators.required, Validators.pattern('[0-9]*$'), Validators.min(1)]],
22     ancho: ['', [Validators.required, Validators.pattern('[0-9]*$'), Validators.min(1)]],
23     largo: ['', [Validators.required, Validators.pattern('[0-9]*$'), Validators.min(1)]]
24   });
25   viewMessageT = false;
26   viewMessageP = false;
27   resultT = '';
28   resultP = '';
29   ngOnInit(): void {
30     initFlowbite();
31   }
32   calcularTriangulo() {
33     if (this.formTriangulo.valid) {
34       this.viewMessageT = false;
35       let base = !!this.formTriangulo.value.base ? +this.formTriangulo.value.base : 0;
36       let altura = !!this.formTriangulo.value.altura ? +this.formTriangulo.value.altura : 0;
37       this.resultT = 'El Area Del Triangulo es de: ' + ((base * altura) / 2) + 'mt2';
38       this.formTriangulo.reset();
39     }
40     else {
41       this.viewMessageT = true;
42       this.resultT = '';
43     }
44   }
45   calcularPrisma() {
46     if (this.formPrisma.valid) {
47       this.viewMessageP = false;
48       let ancho = !!this.formPrisma.value.ancho ? +this.formPrisma.value.ancho : 0;
49       let largo = !!this.formPrisma.value.largo ? +this.formPrisma.value.largo : 0;
50       let altura = !!this.formPrisma.value.altura ? +this.formPrisma.value.altura : 0;
51       this.resultP = 'El Volumen de un Prisma Rectangular es de: ' + ((largo * ancho * altura) / 2) + 'mt2';
52       this.formPrisma.reset();
53     }
54     else {
55       this.viewMessageP = true;
56       this.resultP = '';
57     }
58   }
59 }
60
```

```

1  <h1 class="text-3xl text-white text-center">
2    Realizado Por Andres Felipe Muñoz Acevedo Ficha 370321
3  </h1>
4  <h5 class="text-2xl text-white text-center mt-8">
5    Calcular Area Del Triangulo (Metros)
6  </h5>
7  <div class="md:flex gap-3 mt-4 p-4">
8    <form class="md:w-3/4" [formGroup]="formTriangulo"
9      (submit)="calcularTriangulo()">
10     <div class="mb-5">
11       <label for="email" class="block mb-2 text-sm font-medium
12         text-gray-900 dark:text-white">
13         Ingrese la Altura
14       </label>
15       <input type="text" formControlName="altura"
16         class="bg-gray-50 border border-gray-300
17         text-gray-900 text-sm rounded-lg focus:ring-blue-500
18         focus:border-blue-500 block w-full p-2.5 dark:bg-gray-700
19         dark:border-gray-600 dark:placeholder-gray-400
20         dark:text-white dark:focus:ring-blue-500 dark:focus:border-blue-500"
21         placeholder="145" required />
22       @if (formTriangulo.get('altura')?.invalid &&
23         formTriangulo.get('altura')?.touched) {
24         <span class="text-red-500">
25           Debe ingresar numeros mayor o igual a 1.
26         </span>
27       }
28     </div>
29     <div class="mb-5">
30       <label for=""
31         class="block mb-2 text-sm font-medium text-gray-900
32         dark:text-white">
33         Ingrese la Base
34       </label>
35       <input type="text" placeholder="34" formControlName="base"
36         class="bg-gray-50 border border-gray-300 text-gray-900 text-sm
37         rounded-lg focus:ring-blue-500 focus:border-blue-500 block w-full
38         p-2.5 dark:bg-gray-700 dark:border-gray-600 dark:placeholder-gray-400
39         dark:text-white dark:focus:ring-blue-500 dark:focus:border-blue-500" required />
40       @if (formTriangulo.get('base')?.invalid &&
41         formTriangulo.get('base')?.touched) {
42         <span class="text-red-500">
43           Debe ingresar numeros mayor o igual a 1.
44         </span>
45       }
46     </div>
47     <button type="submit"
48       class="text-white bg-blue-700 hover:bg-blue-800 focus:ring-4 focus:outline-none
49       focus:ring-blue-300 font-medium rounded-lg text-sm w-full sm:w-auto px-5 py-2.5
50       text-center dark:bg-blue-600 dark:hover:bg-blue-700 dark:focus:ring-blue-800">
51       Calcular</button>
52     @if (viewMessageT) {
53       <span class="text-red-500">Campos Vacios.</span>
54     }
55   </form>
56   <figure class="grid place-content-center md:block mt-3 md:mt-0">
57     
58   </figure>
59 </div>
60 <h5 class="text-2xl text-center text-white mb-8">{{resultT}} </h5>
61 <hr>

```



```
1 <h5 class="text-2xl text-white text-center mt-8">
2   Calcular El Volumen De un Prisma Rectangular (Metros)
3 </h5>
4 <div class="md:flex gap-3 mt-4 p-4">
5   <form class="md:w-3/4" [formGroup]="formPrisma" (submit)="calcularPrisma()">
6     <div class="mb-5">
7       <label for="" class="block mb-2 text-sm font-medium text-gray-900 dark:text-white">
8         Ingrese la Altura
9       </label>
10      <input type="text" formControlName="altura" class="bg-gray-50 border border-gray-300
11        text-gray-900 text-sm rounded-lg focus:ring-blue-500 focus:border-blue-500 block
12        w-full p-2.5 dark:bg-gray-700 dark:border-gray-600 dark:placeholder-gray-400
13        dark:text-white dark:focus:ring-blue-500 dark:focus:border-blue-500"
14        placeholder="12" required />
15    </div>
16    <div class="mb-5">
17      <label for="" class="block mb-2 text-sm font-medium text-gray-900 dark:text-white">
18        Ingrese el Ancho
19      </label>
20      <input type="text" placeholder="34" formControlName="ancho"
21        class="bg-gray-50 border border-gray-300 text-gray-900 text-sm rounded-lg
22        focus:ring-blue-500 focus:border-blue-500 block w-full p-2.5 dark:bg-gray-700
23        dark:border-gray-600 dark:placeholder-gray-400 dark:text-white
24        dark:focus:ring-blue-500 dark:focus:border-blue-500" required />
25    </div>
26    <div class="mb-5">
27      <label for="" class="block mb-2 text-sm font-medium text-gray-900 dark:text-white">
28        Ingrese el Largo
29      </label>
30      <input type="text" placeholder="347" formControlName="largo"
31        class="bg-gray-50 border border-gray-300 text-gray-900 text-sm rounded-lg
32        focus:ring-blue-500 focus:border-blue-500 block w-full p-2.5 dark:bg-gray-700
33        dark:border-gray-600 dark:placeholder-gray-400 dark:text-white
34        dark:focus:ring-blue-500 dark:focus:border-blue-500" required />
35    </div>
36    <button type="submit" class="text-white bg-blue-700 hover:bg-blue-800
37      focus:ring-4 focus:outline-none focus:ring-blue-300 font-medium rounded-lg text-sm
38      w-full sm:w-auto px-5 py-2.5 text-center dark:bg-blue-600 dark:hover:bg-blue-700
39      dark:focus:ring-blue-800">Calcular</button>
40  </form>
41  <figure class="grid place-content-center md:block mt-3 md:mt-0">
42    
43  </figure>
44 </div>
45 <h5 class="text-2xl text-center text-white mb-8">{{resultP}} </h5>
46
47 <router-outlet />
48
```

### Justificación:

Tengo dos años de experiencia como desarrollador web es por eso que elegí angular para desarrollar esta evidencia

Nota: cuando ingrese al link click en continuar