PRÁCTICA 3

EJERCICIO 6

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Tabla de contenidos

Validación de los documentos HTML

1. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 5, column 5; to line 5, column 28
```
head>↵    <meta charset="UTF-8" />↵    <
```

2. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 6, column 5; to line 6, column 64
```
8" />↵    <meta name="author" content="Héctor Lavandeira Fernández" />↵    <
```

3. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 7, column 5; to line 7, column 76
```
z" />↵    <meta name="viewport" content="width=device-width, initial-scale=1.0" />↵↵
```

4. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 13, column 5; to line 13, column 84
```
↵    ↵    <link rel="stylesheet" type="text/css" href="CalculadoraRPNEspecializada.css" />↵</hea
```

5. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 25, column 9; to line 25, column 71
```
>↵        <input type="button" value="arcsin" onclick="calc.arcseno()" />↵
```

6. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 26, column 9; to line 26, column 73
```
>↵        <input type="button" value="arccos" onclick="calc.arccoseno()" />↵
```

7. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 27, column 9; to line 27, column 75
```
>↵        <input type="button" value="arctan" onclick="calc.arctangente()" />↵
```

8. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 28, column 9; to line 28, column 65
```
>↵        <input type="button" value="C" onclick="calc.borrar()" />↵
```

9. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 30, column 9; to line 30, column 65
```
>↵        <input type="button" value="sin" onclick="calc.seno()" />↵
```

10. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 31, column 9; to line 31, column 67
```
>↵        <input type="button" value="cos" onclick="calc.coseno()" />↵
```

11. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 32, column 9; to line 32, column 69
```
>↵        <input type="button" value="tan" onclick="calc.tangente()" />↵
```

12. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 33, column 9; to line 33, column 67
```
>↵        <input type="button" value="^" onclick="calc.potencia()" />↵
```

13. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 35, column 9; to line 35, column 63
```
>↵        <input type="button" value="x" onclick="calc.inc()" />↵
```

14. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 36, column 9; to line 36, column 67
```
>↵        <input type="button" value="∂" onclick="calc.derivada()" />↵
```

15. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 37, column 9; to line 37, column 67
```
>↵        <input type="button" value="∫" onclick="calc.integral()" />↵
```

16. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 38, column 9; to line 38, column 67
```
>↵        <input type="button" value="lim" onclick="calc.limite()" />↵
```

17. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 40, column 9; to line 40, column 63
```
>↵        <input type="button" value="√" onclick="calc.raiz()" />↵
```

18. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 41, column 9; to line 41, column 74
```
>↵        <input type="button" value="10^x" onclick="calc.potenciaDiez()" />↵
```

19. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 42, column 9; to line 42, column 70
```
>↵        <input type="button" value="log" onclick="calc.logaritmo()" />↵
```

20. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 43, column 9; to line 43, column 67
```
>↵        <input type="button" value="mod" onclick="calc.modulo()" />↵
```

21. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 45, column 9; to line 45, column 69
```
>↵        <input type="button" value="7" onclick="calc.digitos('7')" />↵
```

22. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 46, column 9; to line 46, column 69
```
>↵        <input type="button" value="8" onclick="calc.digitos('8')" />↵
```

23. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 47, column 9; to line 47, column 69
```
>↵        <input type="button" value="9" onclick="calc.digitos('9')" />↵
```

24. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 48, column 9; to line 48, column 73
```
>↵        <input type="button" value="*" onclick="calc.multiplicacion()" />↵
```

25. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 50, column 9; to line 50, column 69

26. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 51, column 9; to line 51, column 69
```
>↵        <input type="button" value="5" onclick="calc.digitos('5')" />↵
```

27. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 52, column 9; to line 52, column 69
```
>↵        <input type="button" value="6" onclick="calc.digitos('6')" />↵
```

28. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 53, column 9; to line 53, column 67
```
>↵        <input type="button" value="/" onclick="calc.division()" />↵
```

29. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 55, column 9; to line 55, column 69
```
>↵        <input type="button" value="1" onclick="calc.digitos('1')" />↵
```

30. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 56, column 9; to line 56, column 69
```
>↵        <input type="button" value="2" onclick="calc.digitos('2')" />↵
```

31. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 57, column 9; to line 57, column 69
```
>↵        <input type="button" value="3" onclick="calc.digitos('3')" />↵
```

32. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 58, column 9; to line 58, column 64
```
>↵        <input type="button" value="-" onclick="calc.resta()" />↵
```

33. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 60, column 9; to line 60, column 64
```
>↵        <input type="button" value="." onclick="calc.punto()" />↵
```

34. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 61, column 9; to line 61, column 69
>↩ `<input type="button" value="0" onclick="calc.digitos('0')" />↩`

35. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 62, column 9; to line 62, column 68
>↩ `<input type="button" value="Enter" onclick="calc.enter()" />↩`

36. Info **Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.**
From line 63, column 9; to line 63, column 63
>↩ `<input type="button" value="+" onclick="calc.suma()" />↩↩`

Validación de las hojas de estilo

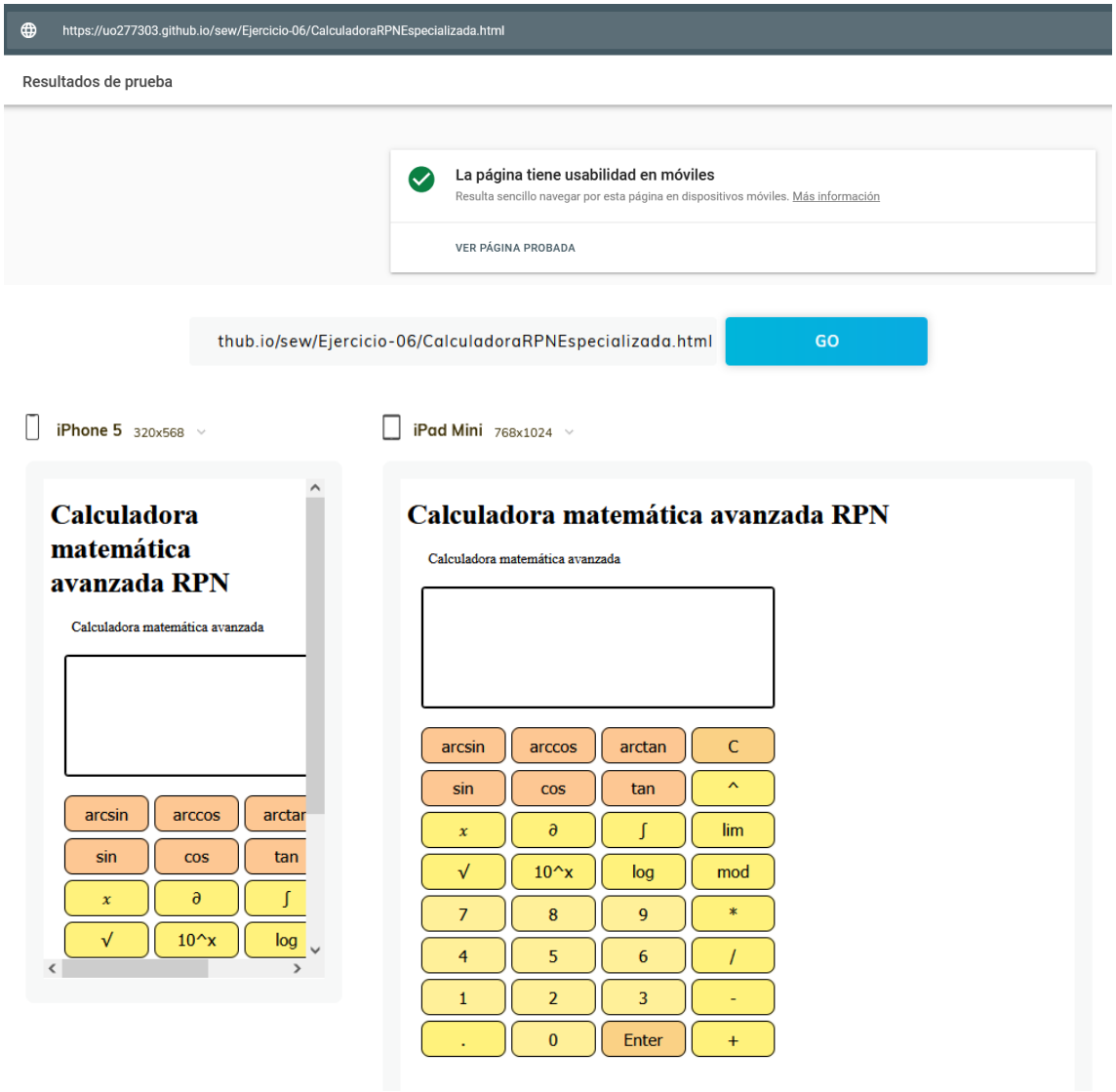
Ir a: Su Hoja de Estilo validada

Resultados del Validador CSS del W3C para CalculadoraRPNEspecializada.css (CSS versión 3 + SVG)

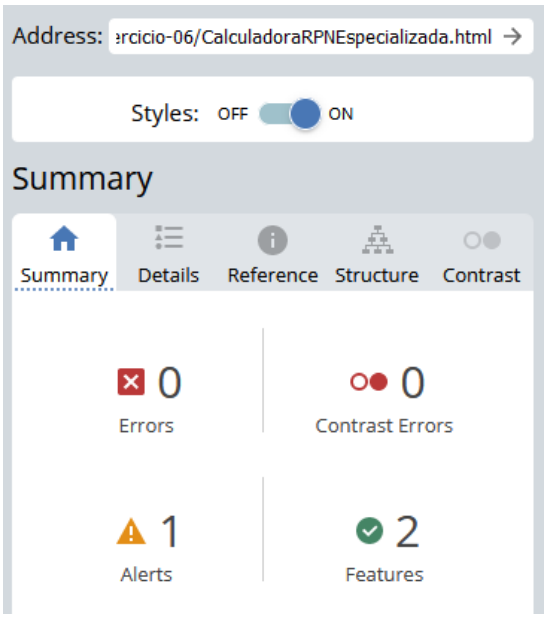
¡Enhorabuena! No error encontrado.

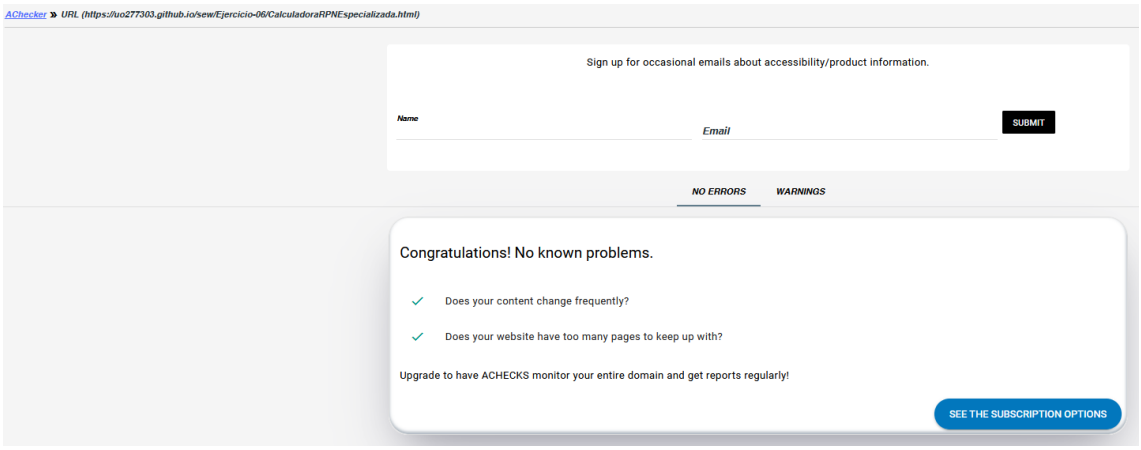
¡Este documento es CSS versión 3 + SVG válido!

Comprobación de la adaptabilidad



Comprobación de la accesibilidad





Acceso por teclado de la calculadora

BOTÓN	COMBINACIÓN DE TECLAS
arcsin	Tecla ‘a’
arccos	Tecla ‘k’
arctan	Tecla ‘n’
sin	Tecla ‘s’
cos	Tecla ‘o’
tan	Tecla ‘t’
C	Teclas ‘c’, retroceso y suprimir
^	Tecla ‘p’
raíz	Tecla ‘r’
10^x	Tecla ‘z’
log	Tecla ‘l’
mod	Tecla ‘m’
*	Tecla ‘*’
/	Alt + Tecla ‘/’
+	Tecla ‘+’
-	Tecla ‘-‘
Enter	Enter
.	Teclas ‘.’ y ‘,’
0123456789	Teclas numéricas
x (incógnita)	Tecla ‘x’
ð (derivada)	Tecla ‘d’
∫ (integral)	Tecla ‘i’
lim (límite)	Tecla ‘y’

Funcionalidades añadidas: Calculadora Matemática Avanzada

Incógnita

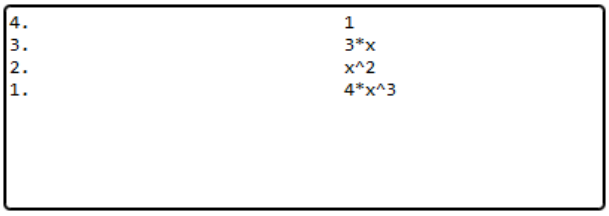
El botón x permite añadir una incógnita. Solo puede añadirse una a la vez, y realizar las operaciones necesarias para (multiplicaciones, potencias…) para construir polinomios. Su funcionamiento es como el de cualquier otro dígito, con la diferencia de que las operaciones (suma, resta...) no darán ningún resultado.

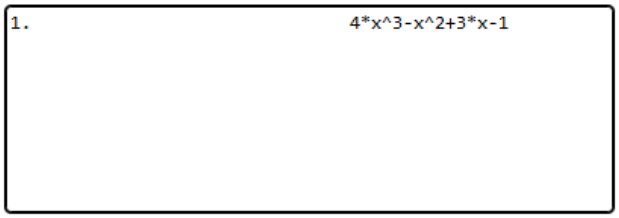
Derivadas

El botón ð permite calcular la derivada de un polinomio. Para esto, es necesario que haya al menos un elemento en la pila, y presionar el botón. A la hora de implementar esta funcionalidad, solo se han tenido en cuenta derivadas de polinomios simples, debido a la dificultad de otras derivadas.

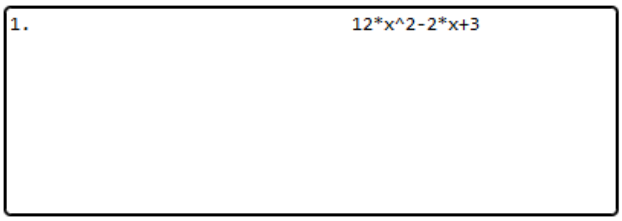
Ejemplo: Calcular la derivada de $4x^3-x^2+3x-1$.

Paso 1: Introducir el polinomio en la pila

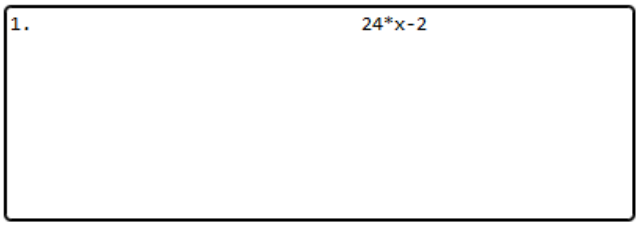


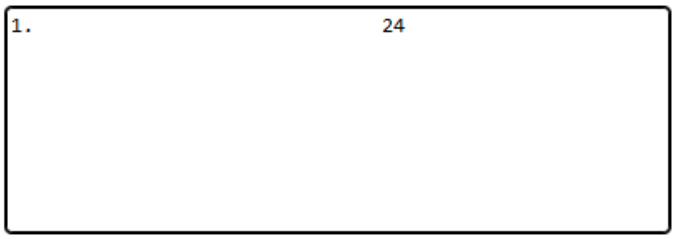


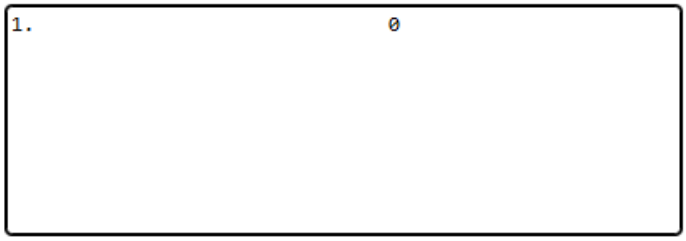
Paso 2: Presionar el botón de derivada



NOTA: Tras esto, puede seguir derivándose el resultado:







Integrales

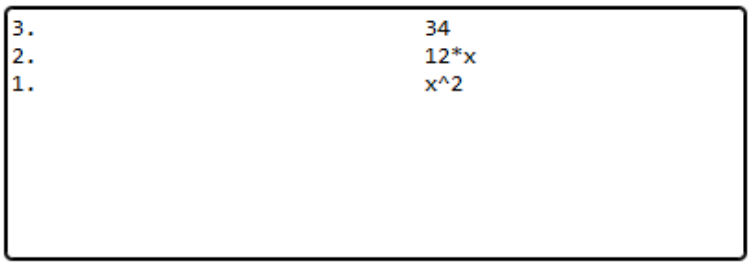
El botón ∫ permite calcular la integral de un polinomio. Para esto, es necesario que haya al menos un elemento en la pila, y presionar el botón de integrales. Como en el caso anterior, solo se han tenido en cuenta las integrales de polinomios simples, debido a la dificultad de otras integrales.

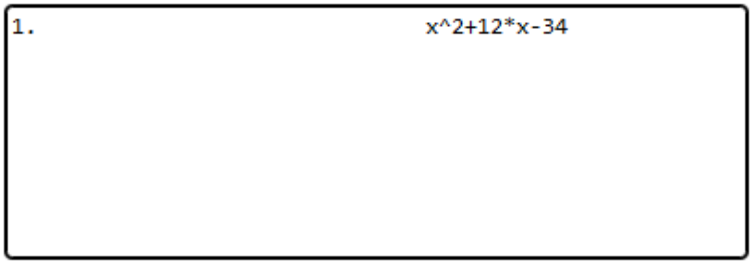
NOTA:

- Matemáticamente, la integral de 0 es igual a cualquier número, por tanto, en esta implementación he decidido interpretarla como 0.
- Al hacer una integral, siempre se le suma al final una constante. En la implementación de la calculadora no he tenido en cuenta esta, ya que podría sumarse el número que se quiera después de hacer la integral.

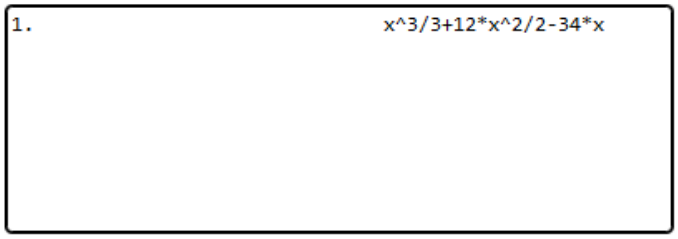
Ejemplo: Calcular la integral de $x^2+12x-34$.

Paso 1: Introducir el polinomio en la pila





Paso 2: Presionar el botón de la integral

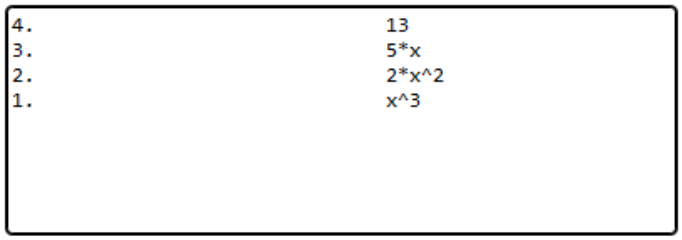


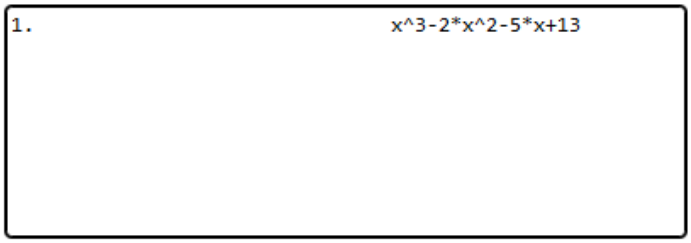
Límites

El botón lim permite calcular el límite de un polinomio cuando x tiende a un número concreto. Para esto, es necesario tener en la pila al menos dos elementos: el primero es el polinomio, y el segundo, el límite. Tras presionar el botón, se añadirá a la pila el resultado del límite.

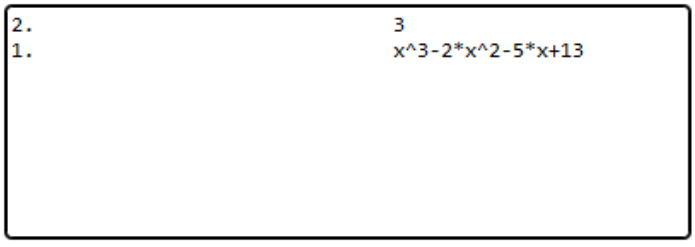
Ejemplo: Calcular el límite de $x^3-2x^2-5x+13$ cuando x->3.

Paso 1: Introducir el polinomio en la pila





Paso 2: Introducir el valor del límite



Paso 3: Presionar el botón del límite