This is a title

Jiuru Lyu

December 6, 2023

Contents

1 This is the section name

1.1 This is the subsection name

Theorem 1.1 Name of thm
This is a theorem.

Definition 1.2 (Name for df). This is a definition.

Example 1.3 This is an example

Solution 1.

□

Remark 1.1 *This is a remark*

Proof 2. This is a proof ■

Corollary 1.4 : This is a corollary

Lemma 1.5 : This is a lemma

Proposition 1.6 : This is a proposition

Conjecture 1.7 : This is a conjecture

Axiom 1.8 : This is an axiom.

Answer.m

```
% Plot function f(x) = 2*x^3 - x - 2
ezplot('2*x^3-x-2', [0, 2])
hold on
plot([0, 2], [0, 0], 'r')
```

```python
def __self__(self):
for i in range(10):
    print(f"This number is {i}.")
```

```java
public static void main(String[] args) {
    System.out.println("Hello World!"); // comment
}
```

Algorithm 1: Bisection Algorithm

Input: $a, b, M, \delta, \varepsilon$
$u \leftarrow f(a)$
$b \leftarrow f(b)$
$e \leftarrow b - a$
Output: output

begin
  if $sign(u) = sign(v)$ **then**
    stop
  for *k=1* **to** M **do**
    $e \leftarrow e/2$
    $c \leftarrow a + e$
    $w \leftarrow f(c)$
    return k, c, w, e
    if $|e| < \delta$ **or** $|w| < \varepsilon$ **then**
      stop
    if $sign(u) \neq= sign(v)$ **then**
      $b \leftarrow c$
      $v \leftarrow w$
    else
      $a \leftarrow c$
      $u \leftarrow w$