Proof By Contradiction

Use a proof by contradiction to show:

$$\neg \, \exists x, y \in \mathbb{Z}: x^2 = 4y + 2$$

Proof By Strong Induction

Prove it takes $n - 1$ breaks to reduce an n-square chocolate bar to n individual pieces.

Prove correct: (why strong induction needed?)

ReverseString(s)

Input : String s
Output: A string whose characters are the reverse of s
// Base Case
1 **if** $length(s) == 1$ **then**
2 | return s;
3 **end**
// Recursive step
4 $mid = \lfloor length(s)/2 \rfloor$;
5 return ReverseString($s[mid+1:end]$)+ReverseString($s[1:mid]$);