CS 360 Lab 6

Name:

Lab 6 tasks

Part 1 (2 points)
The pre-lab required you to extend the arithmetic recursive descent parser included in the lab 6 download to support exponents. Use your extended parser to evaluate

(i) (3^2)^2
(ii) (2*2)^2 + (5+5)^2
(iii) 3^2*2^3

Show the results to the TA: _____ (initials)

Part 2 (3 points)
Use the Mini Language Parser to calculate the 10^{th} and 28^{th} Fibonacci number. You may modify the Fibonacci function you used in the prelab.

Show the results to the TA: _____ (initials)

Part 3 (2 points)
Use Coq to prove that

```
Theorem nil_app : ∀l:natlist,
  [] ++ l = l.
```

Show the result to the TA: _____ (initials)

Part 4 (3 points)
Use Coq to prove associativity of concatenation of lists of integers

```
Theorem app_assoc : ∀l₁ l₂ l₃ : natlist,
  (l₁ ++ l₂) ++ l₃ = l₁ ++ (l₂ ++ l₃)
```

Show the result to the TA: _____ (initials)