CSCE 330 Fall 2000

QUIZ 24

Assigned Monday 00/11/6

The following two functions do the same thing (viz., they compute powerset), but one is more efficient than the other. Which one is the more efficient one? Why?

1.
```
fun pow([]) = [[]]
|   pow(x::xs) =
    let
      val ps = pow(xs)
    in
      ps @ pre(x,ps)
    end;
```

2.
```
fun pow([]) = [[]]
|   pow(x::xs) =
      pow(xs) @ pre(x,pow(xs));
```

Answer: The first function is more efficient, because it calls itself only once (instead of twice) in the recursive step.