

```
1  (*PROBLEM 5*)
2  (*Pre-defined Fibonacci function that was from the assignment*)
3
4  fun fib 0 = 0
5      | fib 1 = 1
6      | fib n = (fib (n-1)) + (fib (n-2))
7  ;
8
9  (*Prob 5.1: A Fibonacci function derived by a continuation-passing style
10 transformation of the earlier pre-defined function*)
11
12 fun fibcc 0 c = (c 0)
13     | fibcc 1 c = (c 1)
14     | fibcc n c = (fibcc(n-1) (fn x => fibcc (n-2) (fn y => c (x + y))))
15 ;
16
17 (*Prob 5.2: Testing fibcc relative to fib*)
18
19 fib 4;
20 (*Result: 3*)
21 fibcc 4 (fn x => x);
22 (*Result: 3*)
23
24 fib 11;
25 (*Result: 89*)
26 fibcc 11 (fn x => x);
27 (*Result: 89*)
```

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