```
disp('1.8 (a) ')
% 1.8 a

sum = 0;
% the sum must be modified from its form in the text
% exp(1000) is just Inf to the computer, and Inf/Inf
% is a NaN. So I multiplied the sum by exp(-k)/exp(-k)
% to remove the problem, and used that as my function.
for k = 0:1000
    sum = sum + fn(k);
end
sum

function z = fn(k)
    z = 1 / (exp(-k) + 1);
end
```