

## Short and Sweet!

**Due: Thurs Nov 9, at the start of class.**

**Late assignments will not be accepted.**

10 pts

Create an m-file containing the following MATLAB code:

```
clear x; clear n; clear s;
format compact; format long;
s = []; x = 0;
for n = 18:-1:2
    x = (1-x)/n;
    s = [s; x];
end;
s
y = exp(-1)
```

1. Your first task is to convey to me that you understand MATLAB syntax. So explain what each line of code does. (3 pts)
2. What is the **cost**, in terms of number of operations, of the `for loop` ? (2 pts)
3. Run the m-file. **What** does the `for loop` compute? (1 pt)
4. **Why** does the `for loop` compute what it does? That is, explain the mathematics behind this code. To get started, you will need to do an algebraic trace (by hand). (4 pts)