

## In-Class Exercise 2: Loops

1. Consider the following **while...end** loop

```
loop=2;
while loop <= 5
    loop = loop + 1;
    fprintf('This is loop number %1.0g. ', loop)
end
```

How many loops will be carried out? What will be the final value of the variable loop?

2. Rewrite the following loop with a **break** statement so that it stops if either loop > 10 or x > 50.

```
loop = 0; x = 0;
while loop >=0
    x = x + loop;
    loop = loop + 1;
end
```

3. Write a function m-file ex02prob3.m which would define the following function using only **for...end** loops and **if...end** blocks.

$$y = \begin{cases} x^2 & 0 \leq x \leq 1 \\ e^{x-1} & x > 1 \\ 0 & \textit{otherwise} \end{cases}$$

Plot your function for  $-2 \leq x \leq 2$  using 100 equally spaced points.