1. Find the largest number in Matlab by repeatedly multiplying 1 by 2. The largest number is the last one which would become infinity if multiplied by 2.

Solution:

```matlab
%% method 1
format long
n=1;
for i=1:10000,
    m=n; n=n*2;
    if n == Inf, break; end,
end, m,i
8.988465674311580e+307
```

```matlab
%% Method 2 -- try
% hint, above output i=1024
2^1023
2^-1024
```

2. Find the smallest positive number in Matlab by repeatedly dividing 1 by 2. Output the last number before 0. This number is eps in MATLAB.

**On-line computer quiz 1, due 9/17**