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```
%Matlab code for finding number of factors
clear all
close all

n=500000;
vv=factors(n);
[mx,index]=max(vv);
fprintf('For n=%d.\n',n)
fprintf('Maximum factors can be observed for %d with number of factors
      %d.\n',mx,index)

function vv=factors(n)
    %creating ones of size n
    vv=ones(n,1);
    %loop for finding factors upto n
    for ii=2:n
        for jj=ii:ii:n
            vv(jj)=vv(jj)+1;
        end
    end
end
end
```

```
%%%%%%%%%%%%%% End of Code %%%%%%%%%%%%%%%
```

*For n=500000.*

*Maximum factors can be observed for 200 with number of factors 498960.*

*Published with MATLAB® R2018a*