

```
>> hvals=logspace(-1,-4,13);
>> err=zeros(1,13);
>> for k=1:length(hvals)
    err(k)=abs(cos(3*(1+hvals(k).*(-2:2))))*c*(1/hvals(k)^2)-(-9*cos(3)));
    %approximates cos(3x) at x=1 with FDA from 3a and h=hval(k)
    %note that stored vector c didn't include the scaling of 1/h^2
end
>> plot(hvals,err)
>> pred=zeros(1,13);
>> for k=1:length(pred)
    pred(k)=-0.0111111 * hvals(k)^4 *(-3^6*cos(3));
    %leading order term of predicted error by fdstencil for h=hvals(k)
end
>> plot(pred,err);
>> loglog(hvals,err)
>>
```