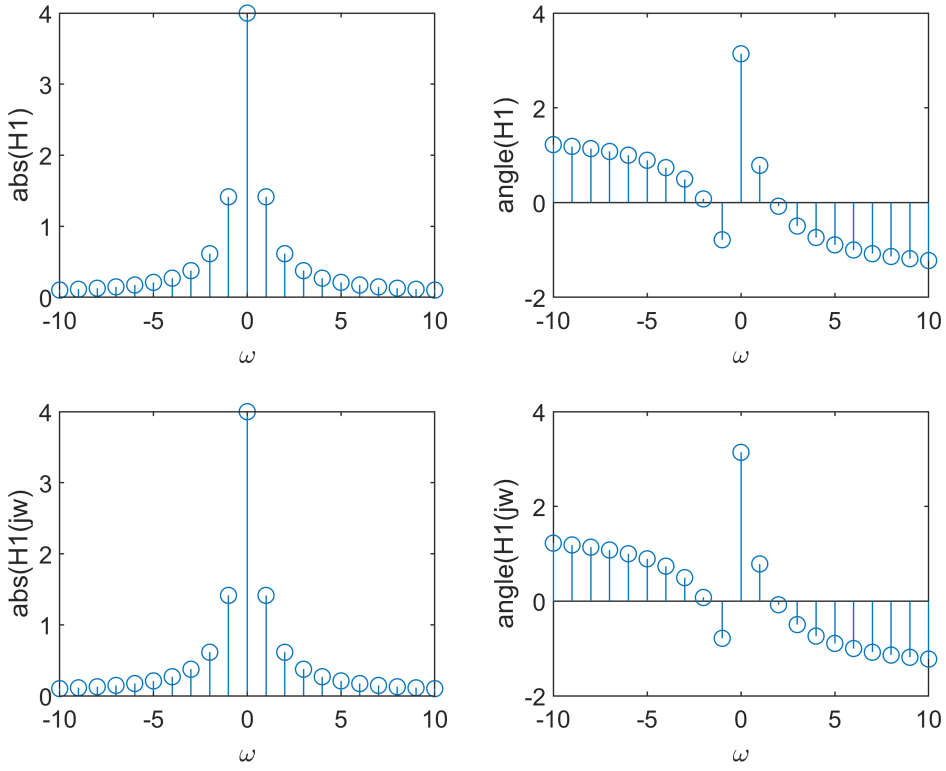
```
b1=[1,-2];
a1=[1,1.5,0.5];
[r1,p1]=residue(b1,a1);
w=(-10:1:10);
H1=0;
for c=1:length(r1)
    H1=H1+r1(c)./(i*w-p1(c));
end
subplot(2,2,1),stem(w,abs(H1)),xlabel('\omega'),ylabel('abs(H1)');
subplot(2,2,2),stem(w,angle(H1)),xlabel('\omega'),ylabel('angle(H1)');
H1jw=(i*w-2)./((i*w).^2+(i*w)*1.5+0.5);
subplot(2,2,3),stem(w,abs(H1jw)),xlabel('\omega'),ylabel('abs(H1(jw)');
subplot(2,2,4),stem(w,angle(H1jw)),xlabel('\omega'),ylabel('angle(H1(jw)');
```




```
%the first two pictures are FT of frequency response which was calculated
%by r1 and p1,while the last two pictures are calculated by a1 and b1
```