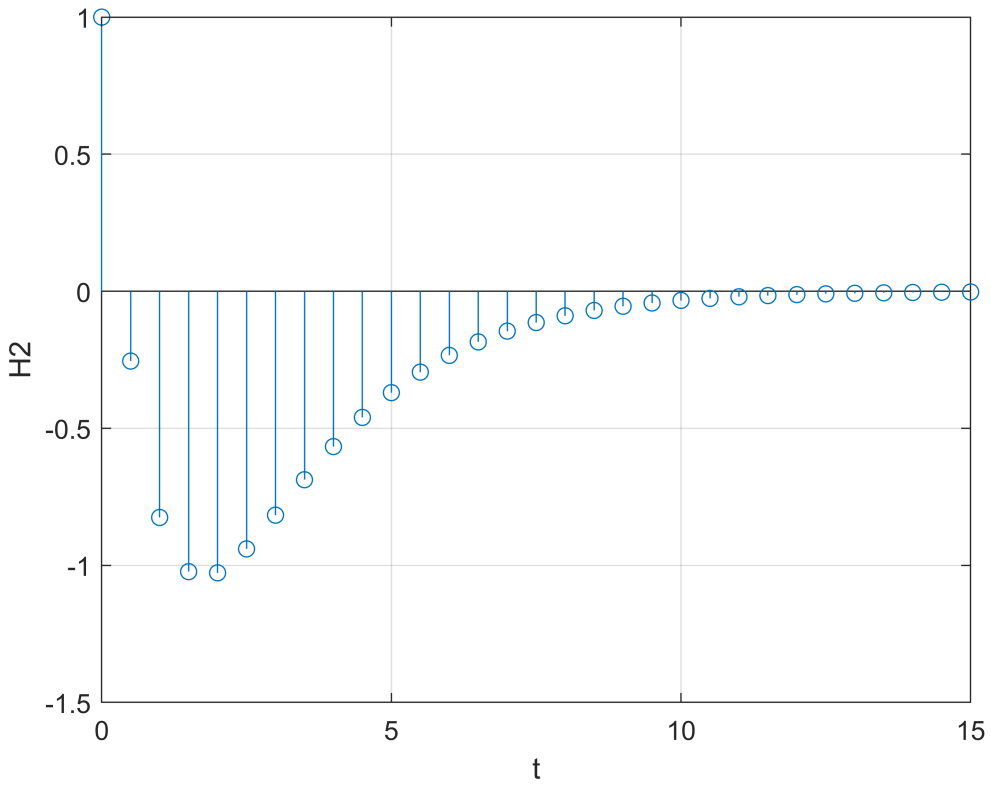
```
b1=[1,-2];
a1=[1,1.5,0.5];
[r1,p1]=residue(b1,a1);
H2=0;
t=[0:0.5:15]
```

```
t = 1×31
         0    0.5000    1.0000    1.5000    2.0000    2.5000    3.0000    3.5000 ···
```

```
for d=1:length(r1)
    H2=H2+r1(d).*exp(p1(d).*t)
end
```

```
H2 = 1×31
    6.0000    3.6392    2.2073    1.3388    0.8120    0.4925    0.2987    0.1812 ···
H2 = 1×31
    1.0000   -0.2548   -0.8254   -1.0231   -1.0274   -0.9400   -0.8169   -0.6877 ···
```

```
stem(t,H2);xlabel('t'),ylabel('H2');grid on;
```




```
%from the picture, we can know that the value at every point is finite and
%h1(t) is convergent,so h1(t) is absolutely integrable.
```