

```
%% Step response of Transfer function 1/((s+1)(s+2))
a = 1;
b = [1 3 2];
c = tf(a,b);
figure(1)
step(c);
%% Step response of c with unity positive feedback
d = feedback(c,1,1);
figure(2)
step(d);
%% Step response of c with unity negative feedback
d1 = feedback(c,1);
figure(3)
step(d1)
%% step response of c with s+1 pole in feedback path
h1 = tf(1,[1 1]);
d2 = feedback(c,h1);
figure(4)
step(d2)
%% step response of c with s+1 zero in feedback path
h2 = tf([1 1],1);
d3 = feedback(c,h2);
figure(5)
step(d3)

%% Step response of Transfer function 1/((s-1)(s+2))
a1 = 1;
b1 = [1 1 -2];
c1 = tf(a1,b1);
figure(6)
step(c1);

%% Step response of c1 with unity positive feedback
k = feedback(c1,1,1);
figure(7)
step(k);
%% Step response of c1 with unity negative feedback
k1 = feedback(c1,1);
figure(8)
step(k1);

%% step response of c1 with s+1 pole in feedback path
h1 = tf(1,[1 1]);
k2 = feedback(c1,h1);
figure(9)
step(k2)
%% step response of c1 with s+1 zero in feedback path
h2 = tf([1 1],1);
k3 = feedback(c1,h2);
figure(10)
```

```
step(k3)
```

```
%% Step response of Transfer function 1/(10s)
```

```
a2 = 1;
```

```
b2 = [10 0];
```

```
c2 = tf(a2,b2);
```

```
figure(11)
```

```
step(c2);
```

```
%% Step response of c2 with unity positive feedback
```

```
v = feedback(c2,1,1);
```

```
figure(12)
```

```
step(v);
```

```
%% Step response of c2 with unity negative feedback
```

```
v1 = feedback(c2,1);
```

```
figure(13)
```

```
step(v1);
```

```
%% step response of c2 with s+1 pole in feedback path
```

```
h1 = tf(1,[1 1]);
```

```
v2 = feedback(c2,h1);
```

```
figure(14)
```

```
step(v2)
```

```
%% step response of c with s+1 zero in feedback path
```

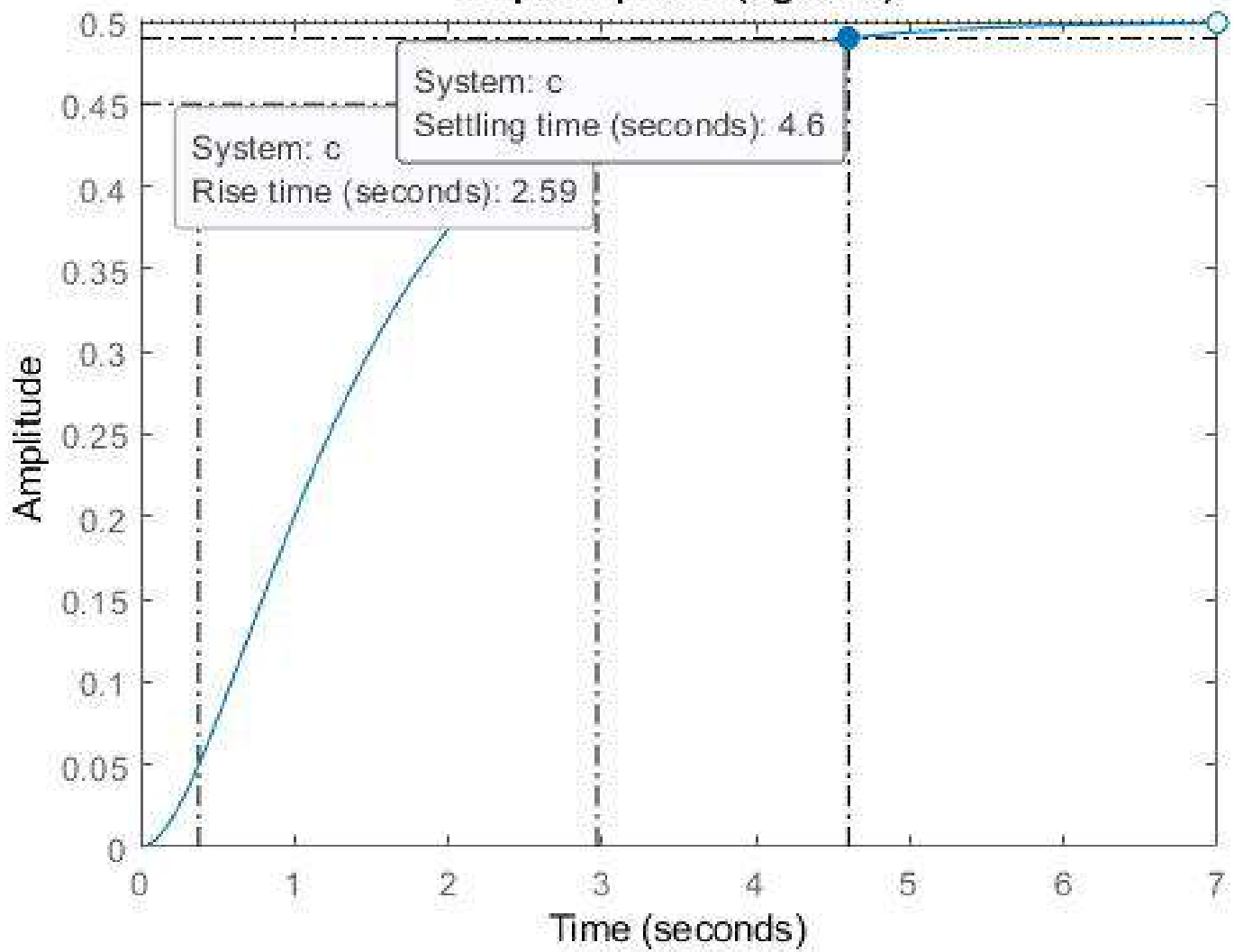
```
h2 = tf([1 1],1);
```

```
v3 = feedback(c2,h2);
```

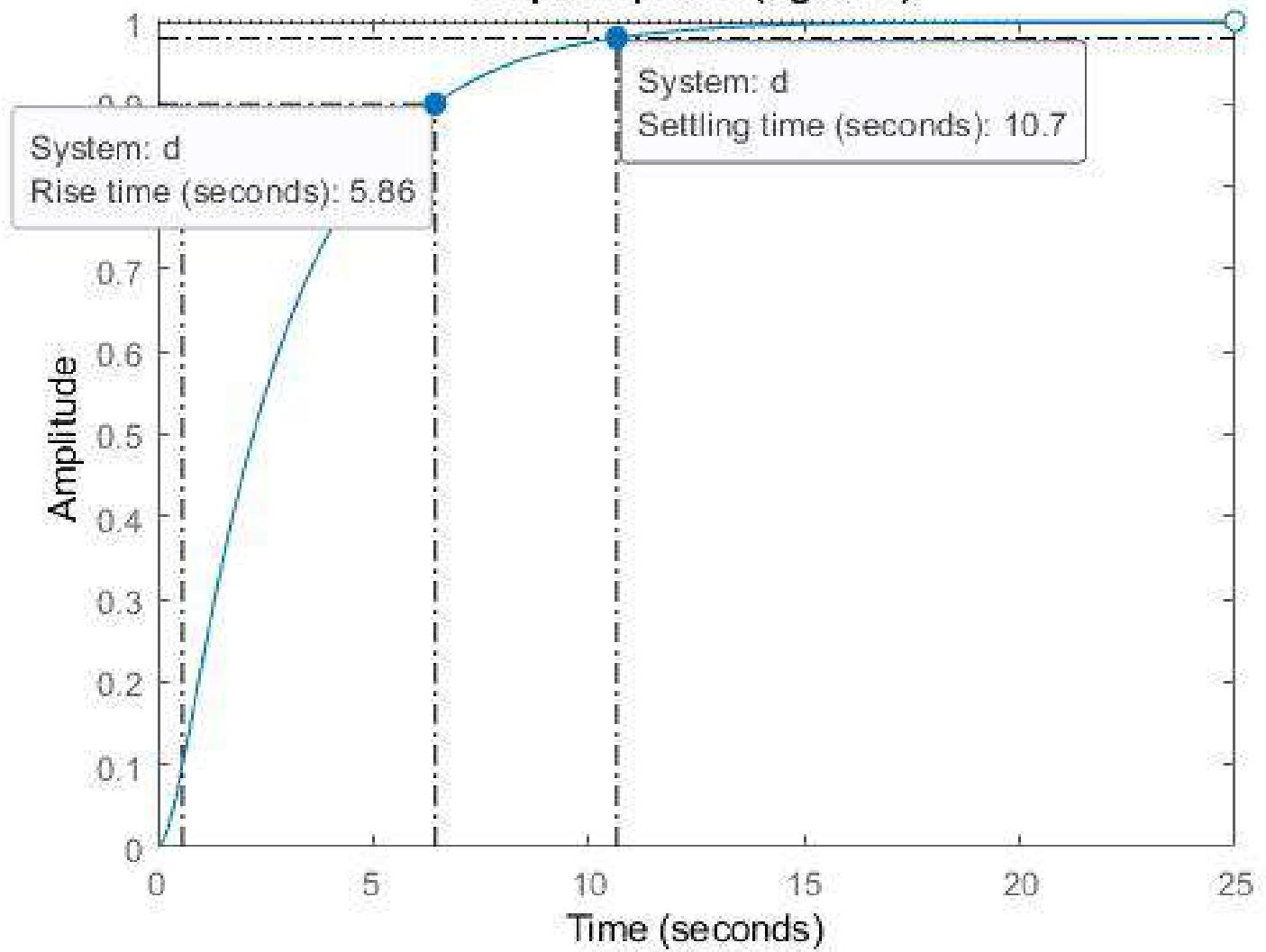
```
figure(15)
```

```
step(v3)
```

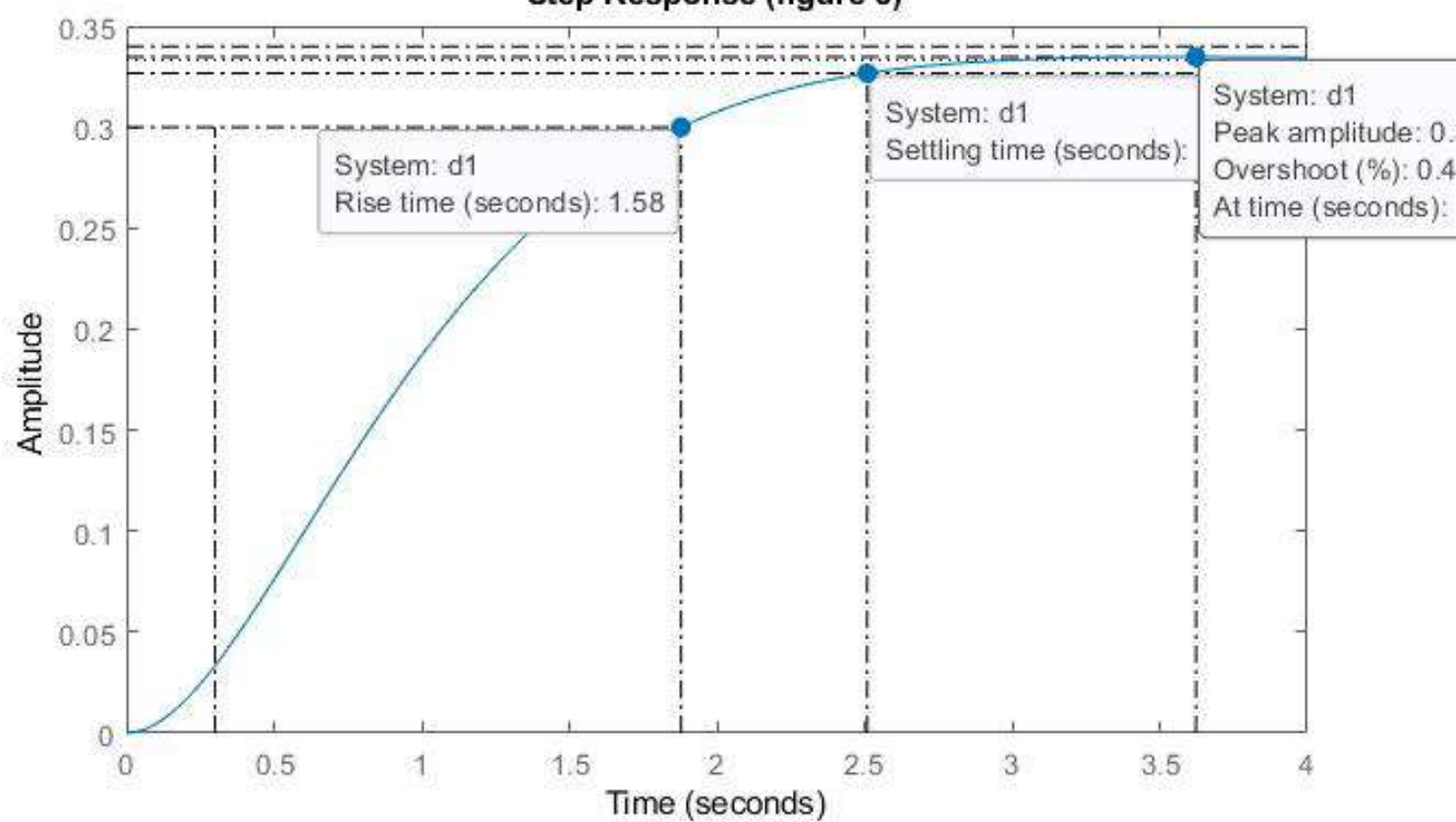
Step Response (figure 1)



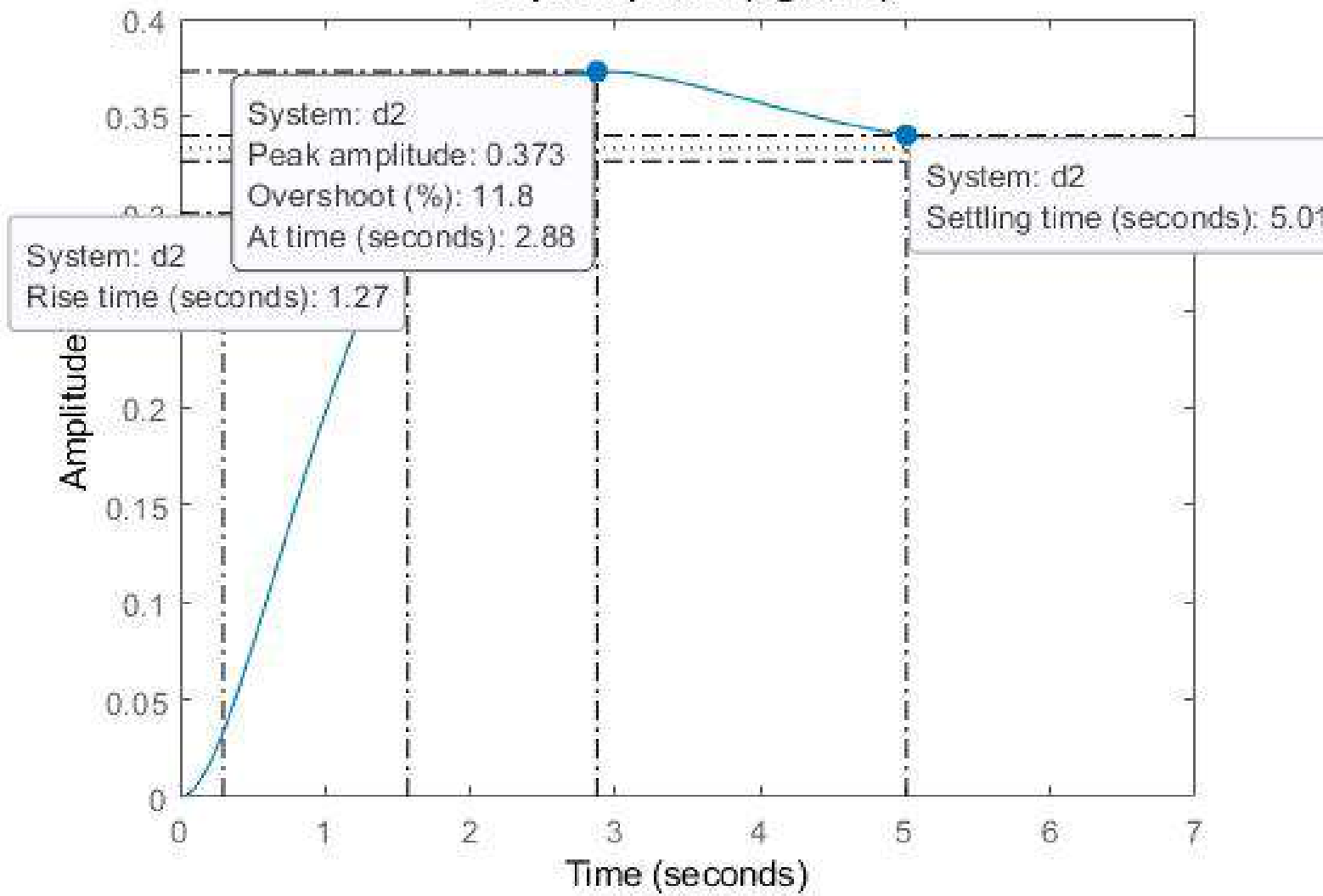
Step Response (figure 2)



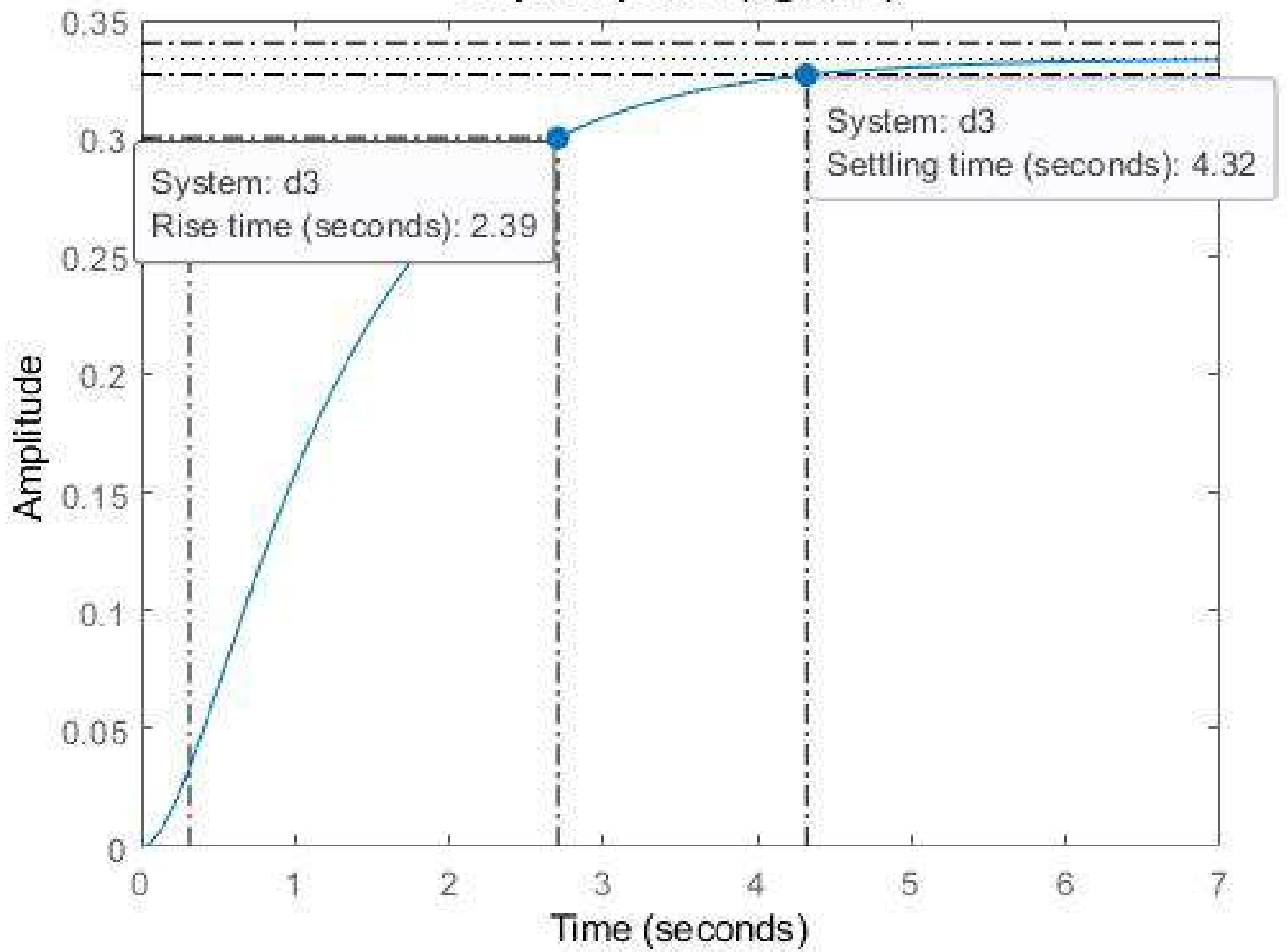
Step Response (figure 3)



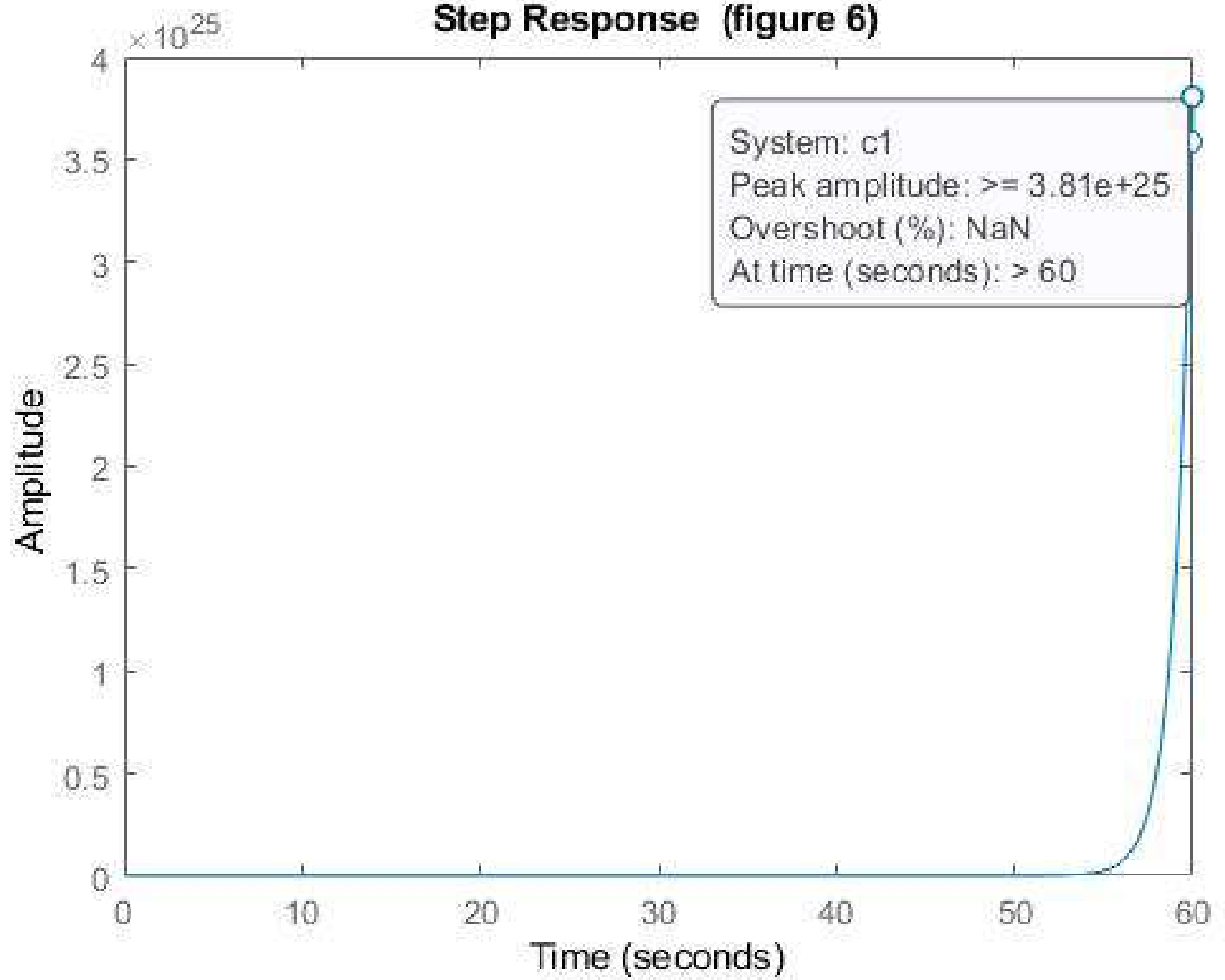
Step Response (figure 4)



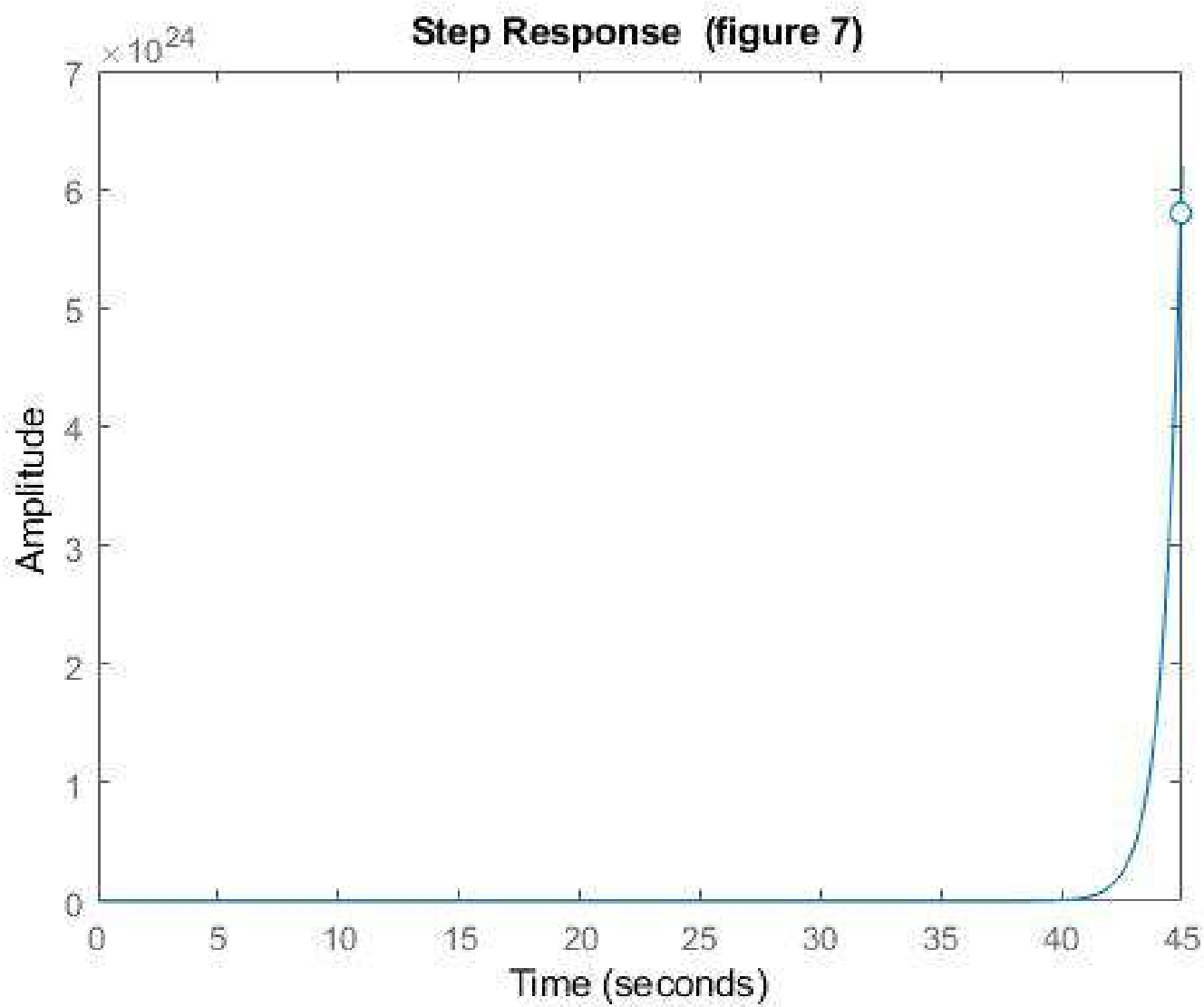
Step Response (figure 5)

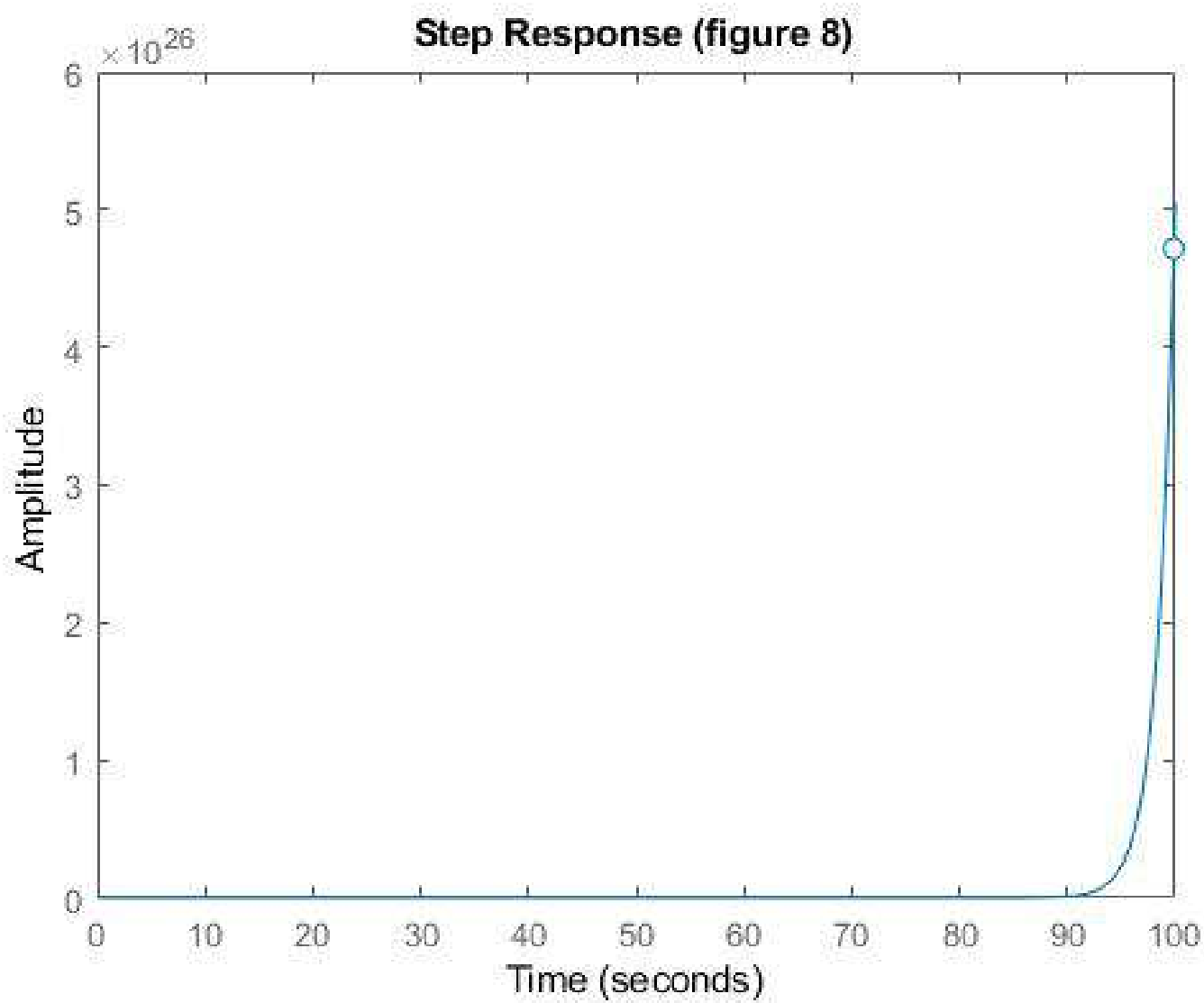


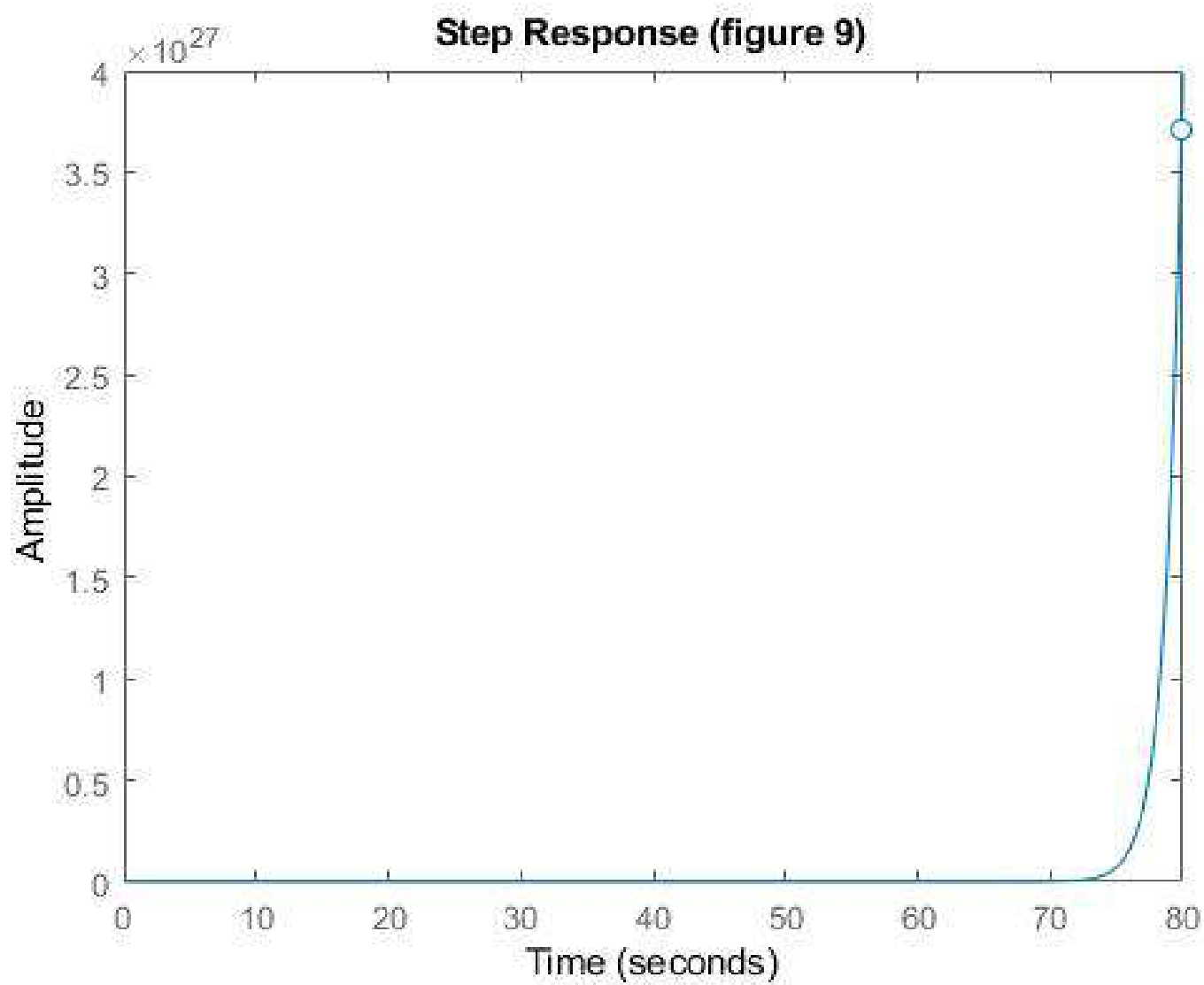
Step Response (figure 6)

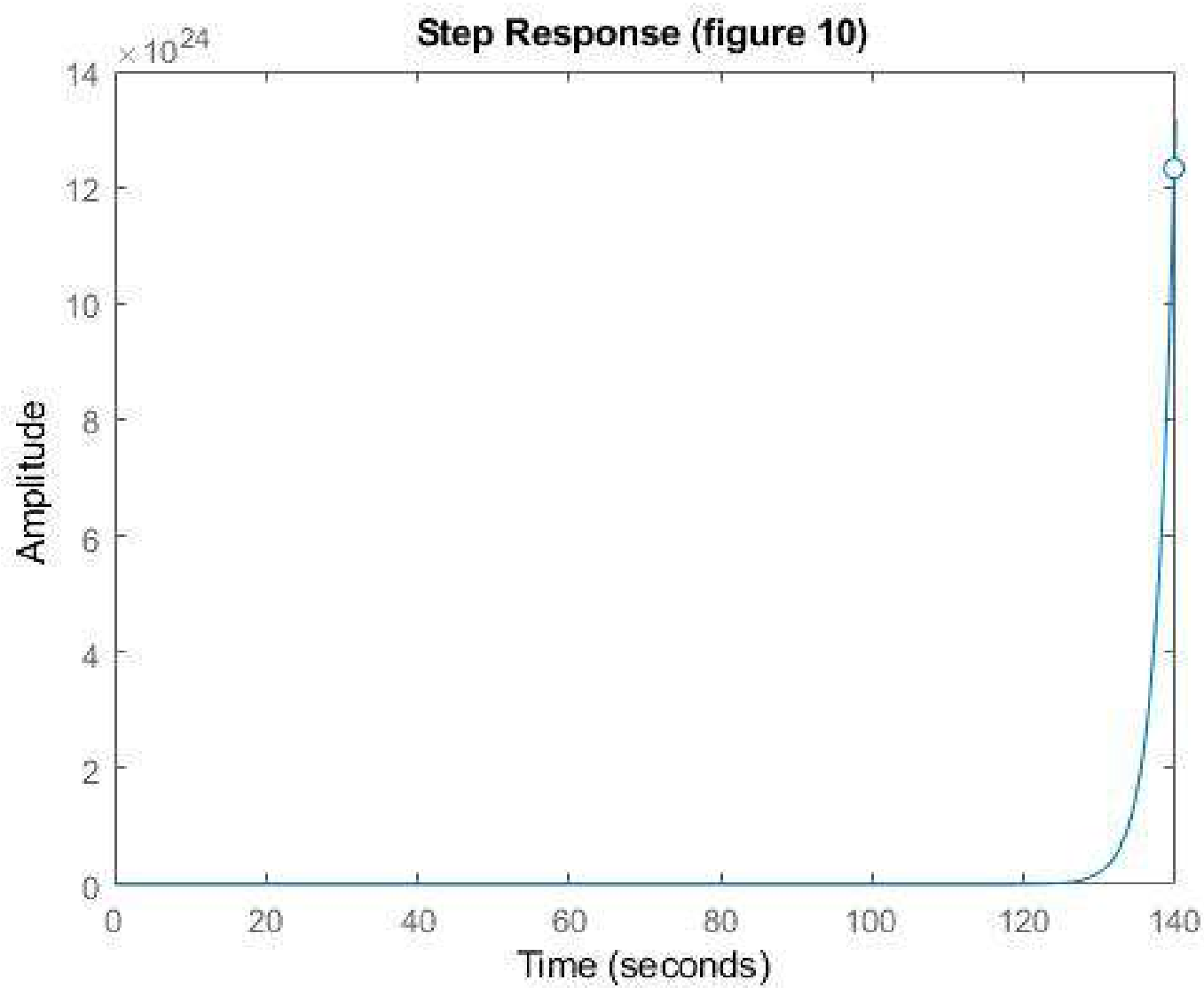




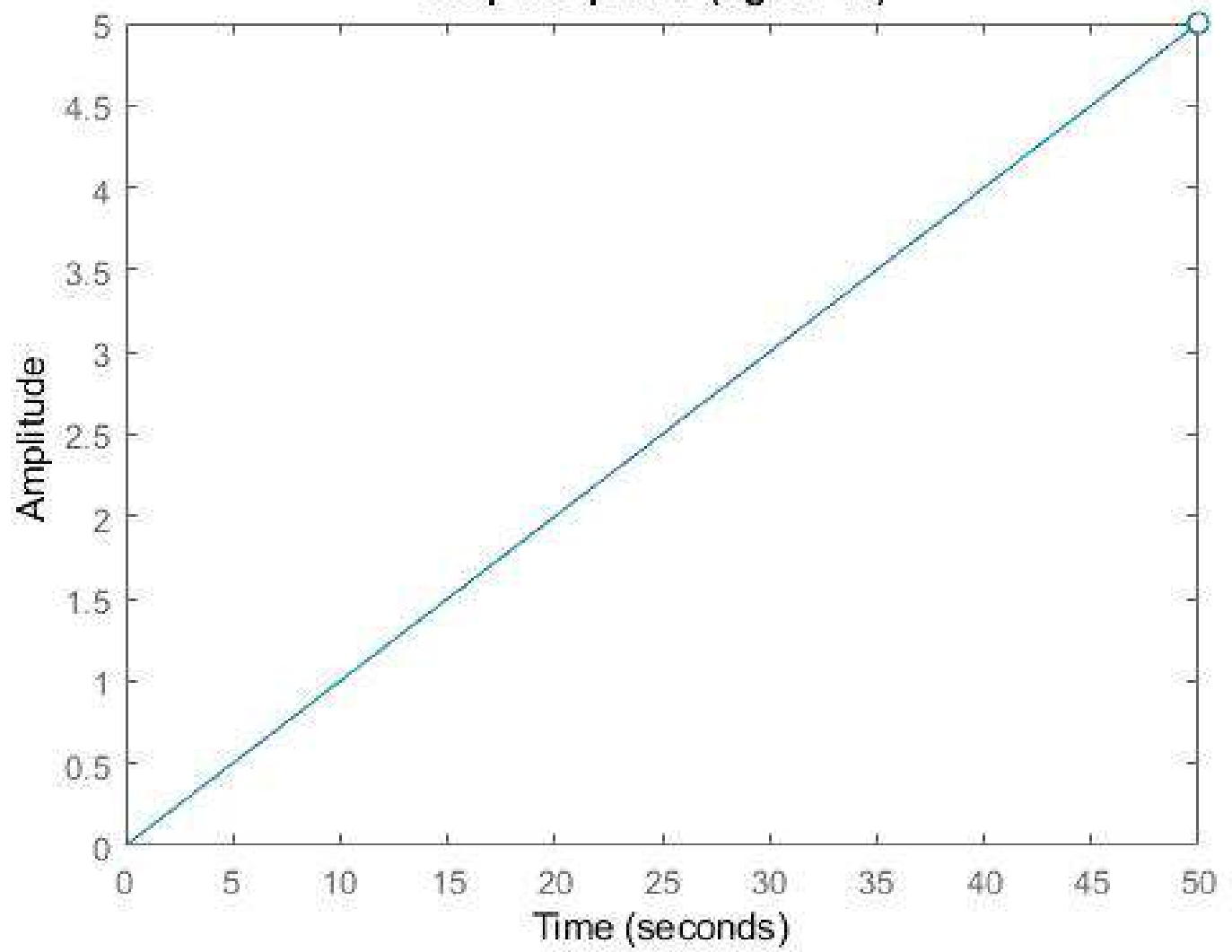


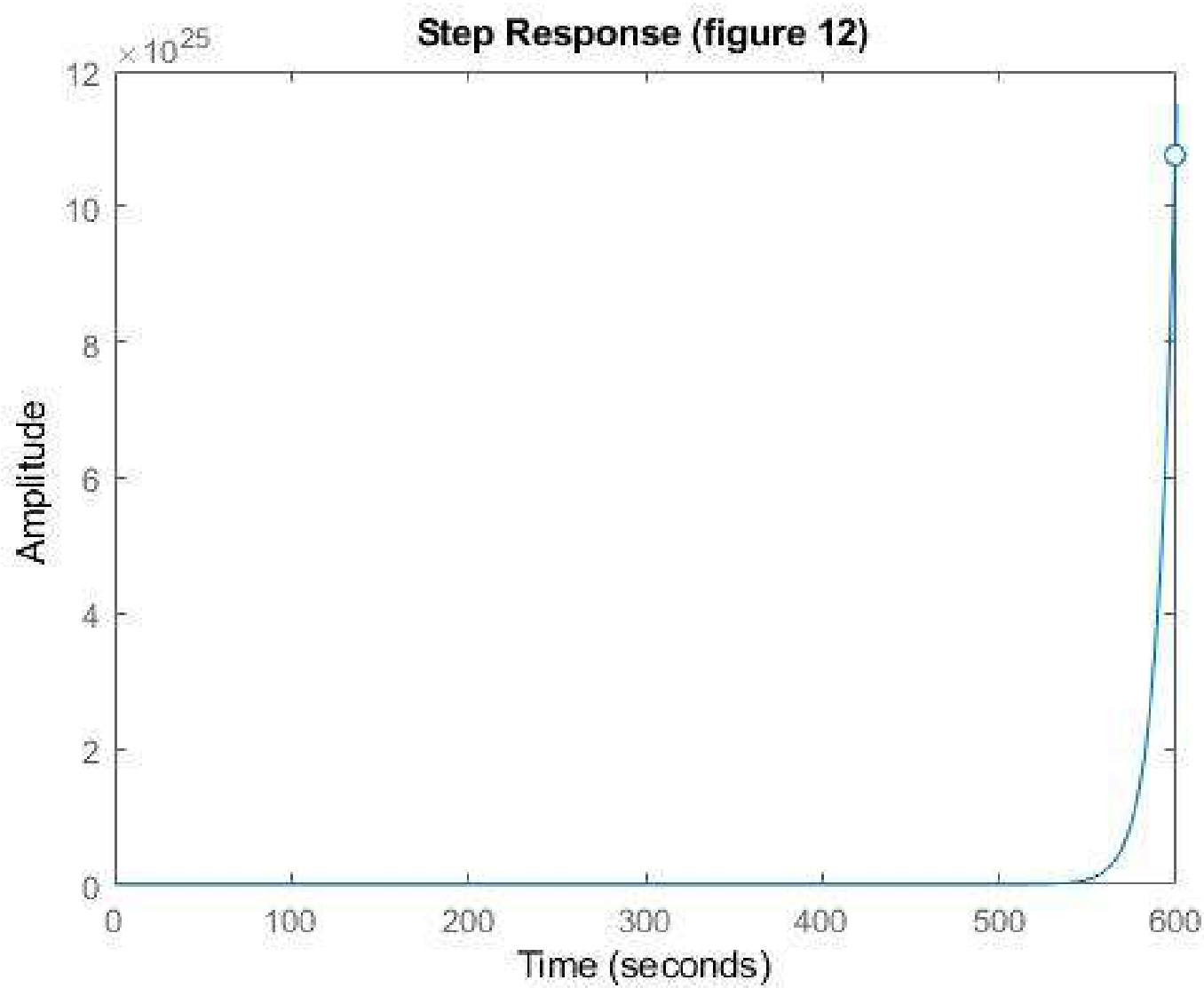




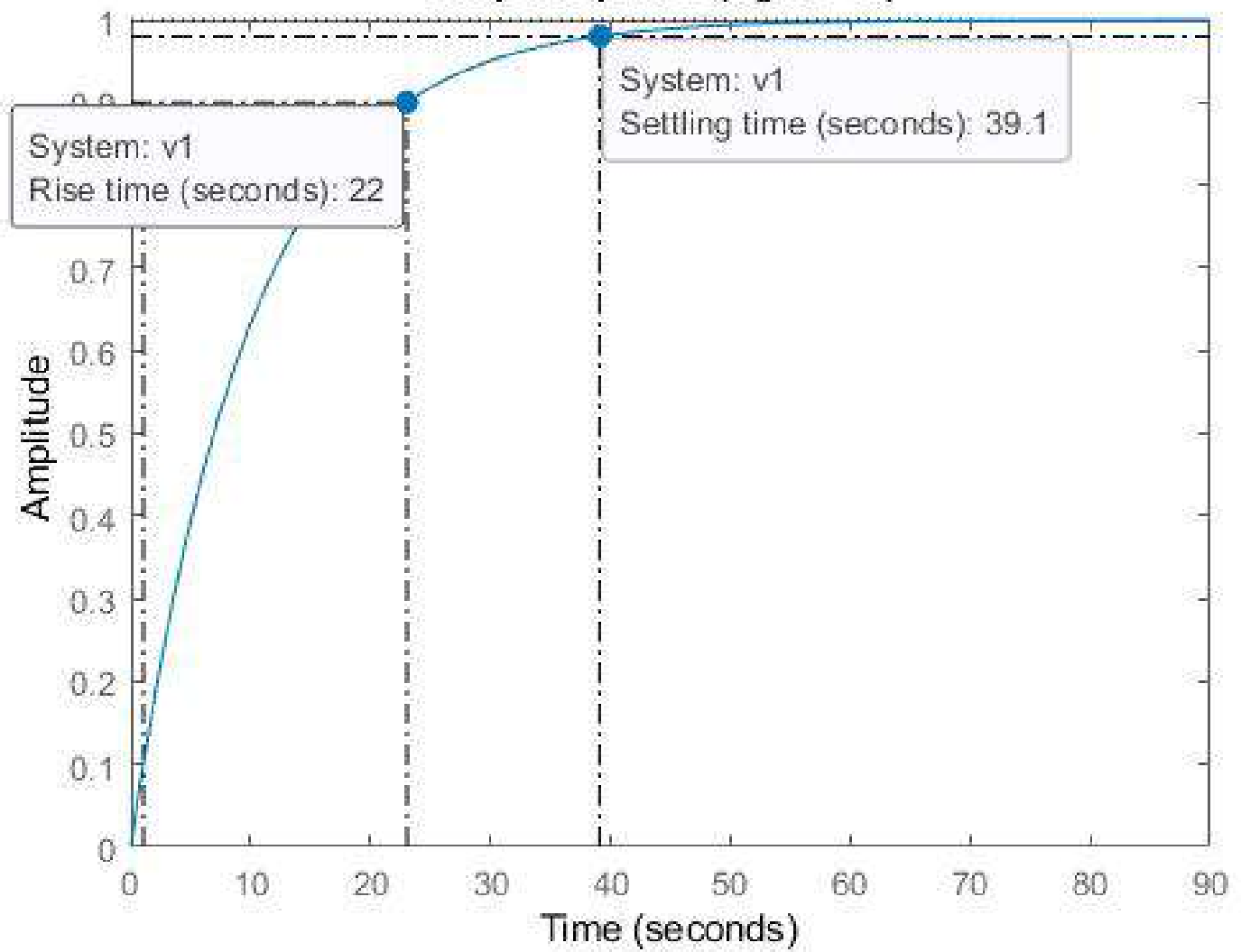


**Step Response (figure 11)**

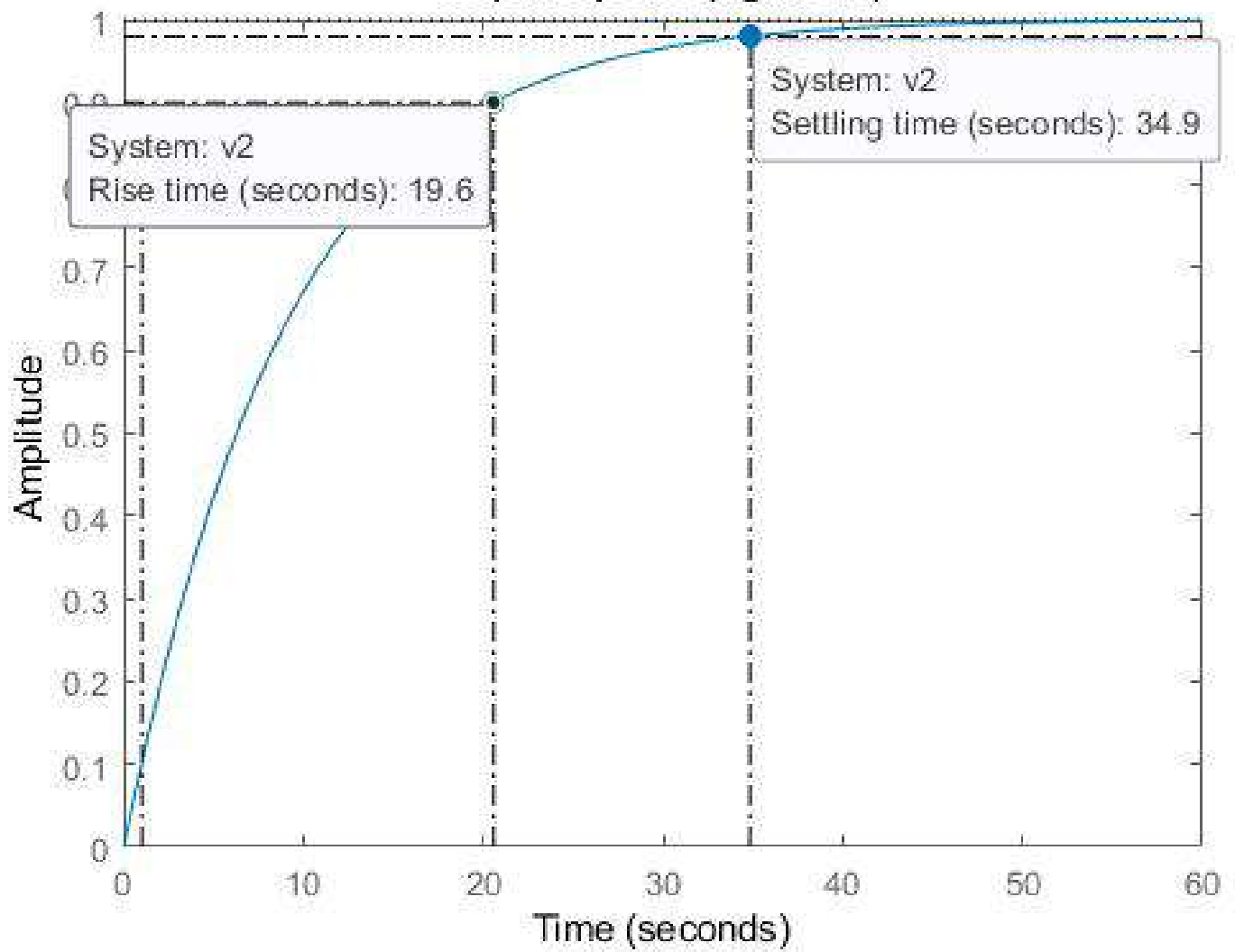




Step Response (figure 13)



Step Response (figure 14)





Step Response (figure 15)

