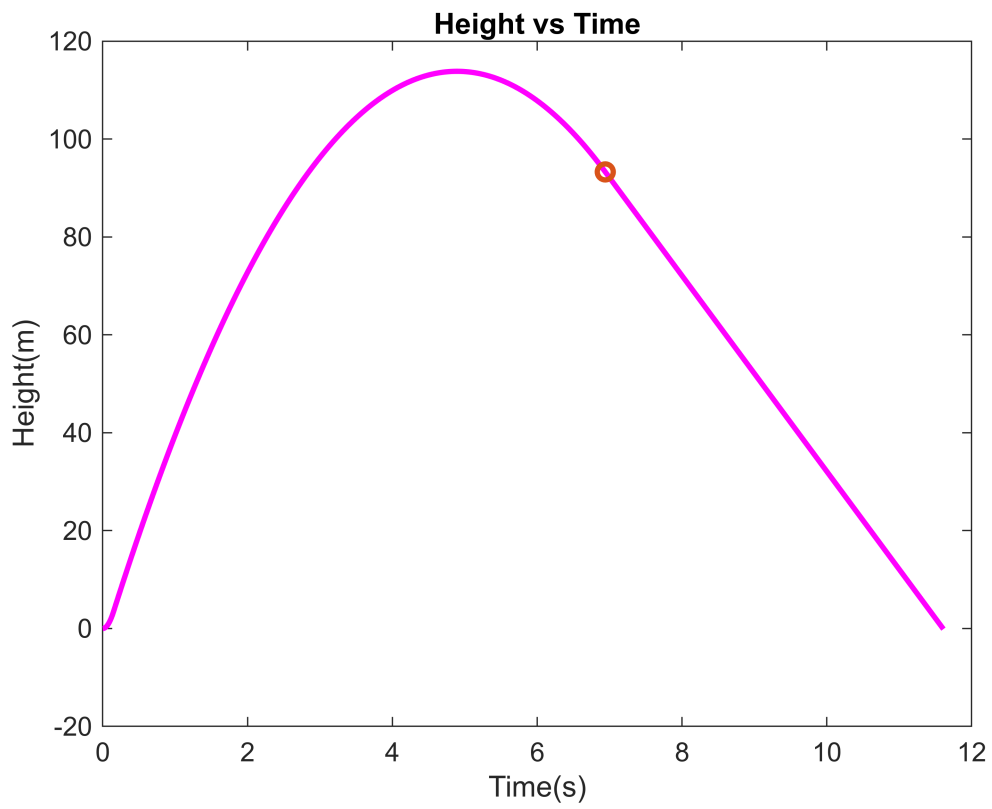


```

clear; clc;
m=0.05; g=9.81; tengine=0.15;
force=16; vchute=-20; dt=0.01;
n=1;
t(n)=0; v(n)=0; h(n)=0;

a1=(force-m*g)/m;
while t(n)<tengine & n<50000
    n=n+1;
    t(n)=t(n-1)+dt;
    v(n)=a1*t(n);
    h(n)=0.5*a1*t(n)^2;
end
v1=v(n); h1=h(n); t1=t(n);
while v(n)>=vchute & n<50000
    n=n+1;
    t(n)=t(n-1)+dt;
    v(n)=v1-g*(t(n)-t1);
    h(n)=h1+v1*(t(n)-t1)-0.5*g*(t(n)-t1)^2;
end
v2=v(n); h2=h(n); t2=t(n);
while h(n) >0 & n<50000
    n=n+1;
    t(n)=t(n-1)+dt;
    v(n)=vchute;
    h(n)=h2+vchute*(t(n)-t2);
end
plot(t,h,'m',t2,h2,'o','linewidth',2)
xlabel('Time(s)')
ylabel('Height(m)')
title('Height vs Time')

```



```
figure
plot(t,v,'b',t2,v2,'o','linewidth',2)
xlabel('Time(s)')
ylabel('Velocity(m/s)')
title('Velocity vs Time')
```

