

## QUESTION 1

```
commandwindow
```

```
clear
```

```
clc
```

```
close all
```

```
syms t
```

```
a=(120*pi*t)
```

```
V=110*cos(a)
```

```
I=diff(V)
```

```
P=I*V
```

```
t=0:0.001:0.35
```

```
Vn=subs(V)
```

```
Vnn=double(Vn)
```

```
In=(I)
```

```
In=subs(I)
```

```
Inn=double(In)
```

```
Pn=subs(P)
```

```
Pnn=double(Pn)
```

```
plot(t,Vnn,'b')
```

```
hold on
```

```
plot(t,Inn,'k')
```

```
hold on
```

```
hold on
```

```
plot(t,Pnn,'r')
```

```
legend('voltage(V)', 'current(A)', 'power(W)')
```

grid on

grid minor

xlabel=('time(s)')

ylabel=('variable')

GRAPH



