OZIORO PEACE DOUTIMI

17/ENG03/048

CIVIL ENGINEERING

commandwindow

clear

clc

close all

syms t

v(t)=110\*cos(120\*pi\*t)

i=diff(v)

p=diff(i)

t=0:0.01:0.35

vn=subs(v)

vnn=double(vn)

in=subs(i)

inn=double(in)

pn=subs(p)

pnn=double(pn)

plot(t,vnn)

hold on

plot(t,inn)

hold on

plot(t,pnn)

legend('voltage(v)','current(i)','power(w)')

grid on

grid minor

v(t) =

110\*cos(120\*pi\*t)

i(t) =

-13200\*pi\*sin(120\*pi\*t)

p(t) =

-1584000\*pi^2\*cos(120\*pi\*t)

t =

Columns 1 through 5

0 0.0100 0.0200 0.0300 0.0400

Columns 6 through 10

0.0500 0.0600 0.0700 0.0800 0.0900

Columns 11 through 15

0.1000 0.1100 0.1200 0.1300 0.1400

Columns 16 through 20

0.1500 0.1600 0.1700 0.1800 0.1900

Columns 21 through 25

0.2000 0.2100 0.2200 0.2300 0.2400

Columns 26 through 30

0.2500 0.2600 0.2700 0.2800 0.2900

Columns 31 through 35

0.3000 0.3100 0.3200 0.3300 0.3400

Column 36

0.3500

vn(t) =

[ 110, - (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, - (55\*5^(1/2))/2 - 55/2, 110, - (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, - (55\*5^(1/2))/2 - 55/2, 110, - (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, - (55\*5^(1/2))/2 - 55/2, 110, - (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, - (55\*5^(1/2))/2 - 55/2, 110, - (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, - (55\*5^(1/2))/2 - 55/2, 110, - (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, - (55\*5^(1/2))/2 - 55/2, 110, - (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, (55\*5^(1/2))/2 - 55/2, - (55\*5^(1/2))/2 - 55/2, 110]

vnn =

Columns 1 through 5

110.0000 -88.9919 33.9919 33.9919 -88.9919

Columns 6 through 10

110.0000 -88.9919 33.9919 33.9919 -88.9919

Columns 11 through 15

110.0000 -88.9919 33.9919 33.9919 -88.9919

Columns 16 through 20

110.0000 -88.9919 33.9919 33.9919 -88.9919

Columns 21 through 25

110.0000 -88.9919 33.9919 33.9919 -88.9919

Columns 26 through 30

110.0000 -88.9919 33.9919 33.9919 -88.9919

Columns 31 through 35

110.0000 -88.9919 33.9919 33.9919 -88.9919

Column 36

110.0000

in(t) =

[ 0, 3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), -3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), 3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), -3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), 0, 3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), -3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), 3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), -3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), 0, 3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), -3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), 3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), -3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), 0, 3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), -3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), 3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), -3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), 0, 3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), -3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), 3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), -3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), 0, 3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), -3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), 3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), -3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), 0, 3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), -3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), 3300\*pi\*2^(1/2)\*(5^(1/2) + 5)^(1/2), -3300\*2^(1/2)\*pi\*(5 - 5^(1/2))^(1/2), 0]

inn =

1.0e+04 \*

Columns 1 through 5

0 2.4375 -3.9439 3.9439 -2.4375

Columns 6 through 10

0 2.4375 -3.9439 3.9439 -2.4375

Columns 11 through 15

0 2.4375 -3.9439 3.9439 -2.4375

Columns 16 through 20

0 2.4375 -3.9439 3.9439 -2.4375

Columns 21 through 25

0 2.4375 -3.9439 3.9439 -2.4375

Columns 26 through 30

0 2.4375 -3.9439 3.9439 -2.4375

Columns 31 through 35

0 2.4375 -3.9439 3.9439 -2.4375

Column 36

0

pn(t) =

[ -1584000\*pi^2, 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2, 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2, 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2, 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2, 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2, 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2, 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), -1584000\*pi^2\*(5^(1/2)/4 - 1/4), 1584000\*pi^2\*(5^(1/2)/4 + 1/4), -1584000\*pi^2]

pnn =

1.0e+07 \*

Columns 1 through 5

-1.5633 1.2648 -0.4831 -0.4831 1.2648

Columns 6 through 10

-1.5633 1.2648 -0.4831 -0.4831 1.2648

Columns 11 through 15

-1.5633 1.2648 -0.4831 -0.4831 1.2648

Columns 16 through 20

-1.5633 1.2648 -0.4831 -0.4831 1.2648

Columns 21 through 25

-1.5633 1.2648 -0.4831 -0.4831 1.2648

Columns 26 through 30

-1.5633 1.2648 -0.4831 -0.4831 1.2648

Columns 31 through 35

-1.5633 1.2648 -0.4831 -0.4831 1.2648

Column 36

-1.5633

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