
```

%Compensador de red de adelanto
%
%      a(Ts + 1)
% Gc(s) = -----
%      (aTs + 1)
%
%

clear
clc
a = 0.1
T = 1
num = a * [T 1];
den = [a*T 1];
Gc = tf(num, den)
w = 0.1:0.1:10000;
nyquist(Gc,w)
axis([0 1 -0.5 0.5]);
fprintf('Programa pausado. Presione enter para continuar\n');
%pause;
clf;

w = logspace(-1,2,100);
bode(Gc,w)
grid on;
fiM = (180 / pi) * asin((1 - a) / (1 + a))
wM = 1 / (T * sqrt(a))
fprintf('Programa pausado. Presione enter para continuar\n');
%pause;
clf;

a = 1/4
T = 1
num = a * [T 1];
den = [a*T 1];
Gc = tf(num, den)
bode(Gc,w)
grid on;
fiM = (180 / pi) * asin((1 - a) / (1 + a))
wM = 1 / (T * sqrt(a))
fprintf('Programa pausado. Presione enter para continuar\n');
%pause;
clf;

a = (sqrt(2) - 1) / (sqrt(2) + 1)
T = 1
num = a * [T 1];
den = [a*T 1];
Gc = tf(num, den)
bode(Gc,w)
grid on;
fiM = (180 / pi) * asin((1 - a) / (1 + a))
wM = 1 / (T * sqrt(a))

```

```
fprintf('Programa pausado. Presione enter para continuar\n');
%pause;
clf;
```

```
a =
```

```
0.1000
```

```
T =
```

```
1
```

```
Gc =
```

```
0.1 s + 0.1
-----
0.1 s + 1
```

Continuous-time transfer function.

Programa pausado. Presione enter para continuar

```
fiM =
```

```
54.9032
```

```
wM =
```

```
3.1623
```

Programa pausado. Presione enter para continuar

```
a =
```

```
0.2500
```

```
T =
```

```
1
```

```
Gc =
```

```
0.25 s + 0.25
-----
0.25 s + 1
```

Continuous-time transfer function.

$f_i M =$

36.8699

$w_M =$

2

Programa pausado. Presione enter para continuar

$a =$

0.1716

$T =$

1

$G_C =$

$$\frac{0.1716 \text{ s} + 0.1716}{0.1716 \text{ s} + 1}$$

Continuous-time transfer function.

$f_i M =$

45.0000

$w_M =$

2.4142

Programa pausado. Presione enter para continuar

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