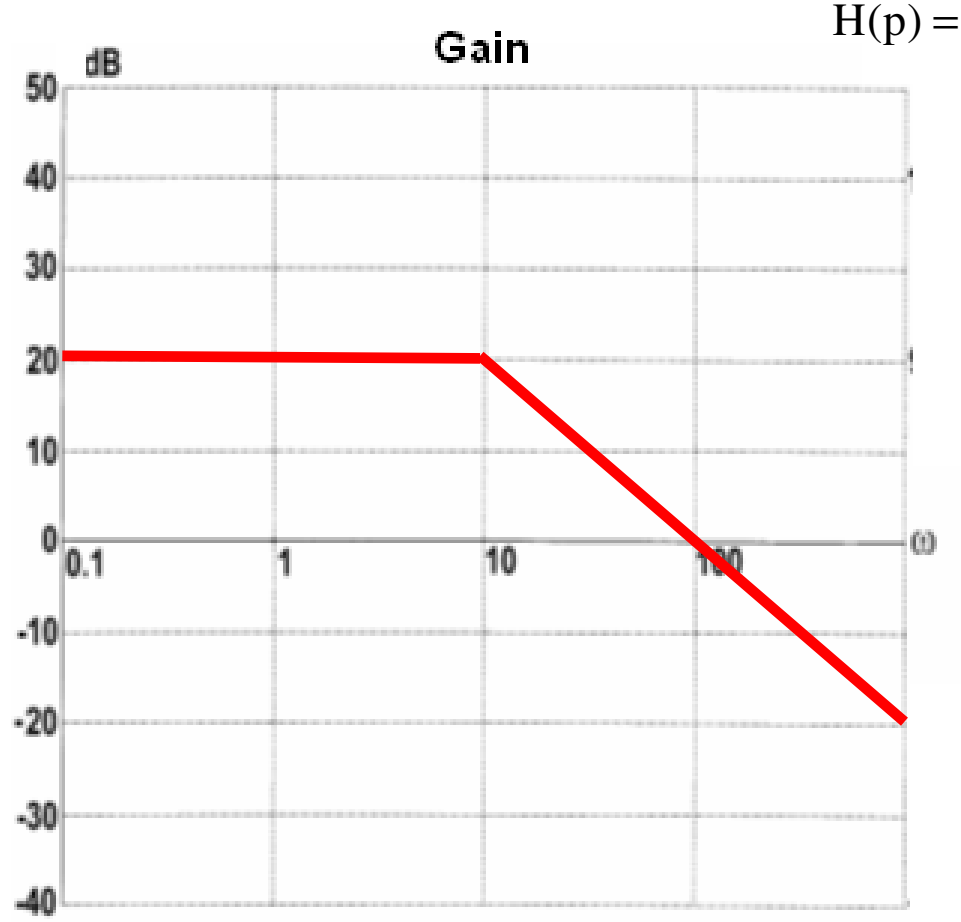
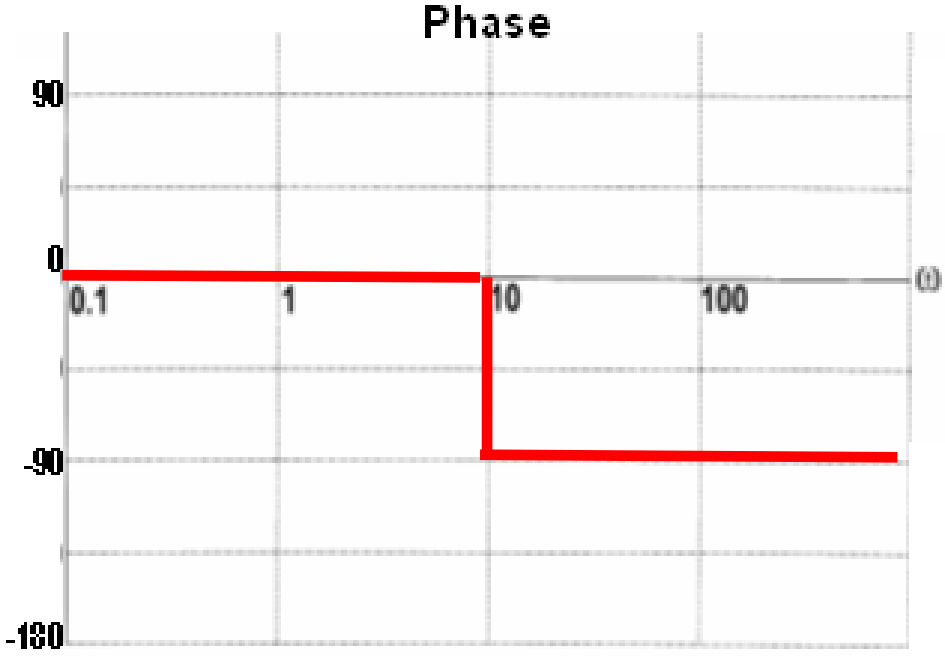
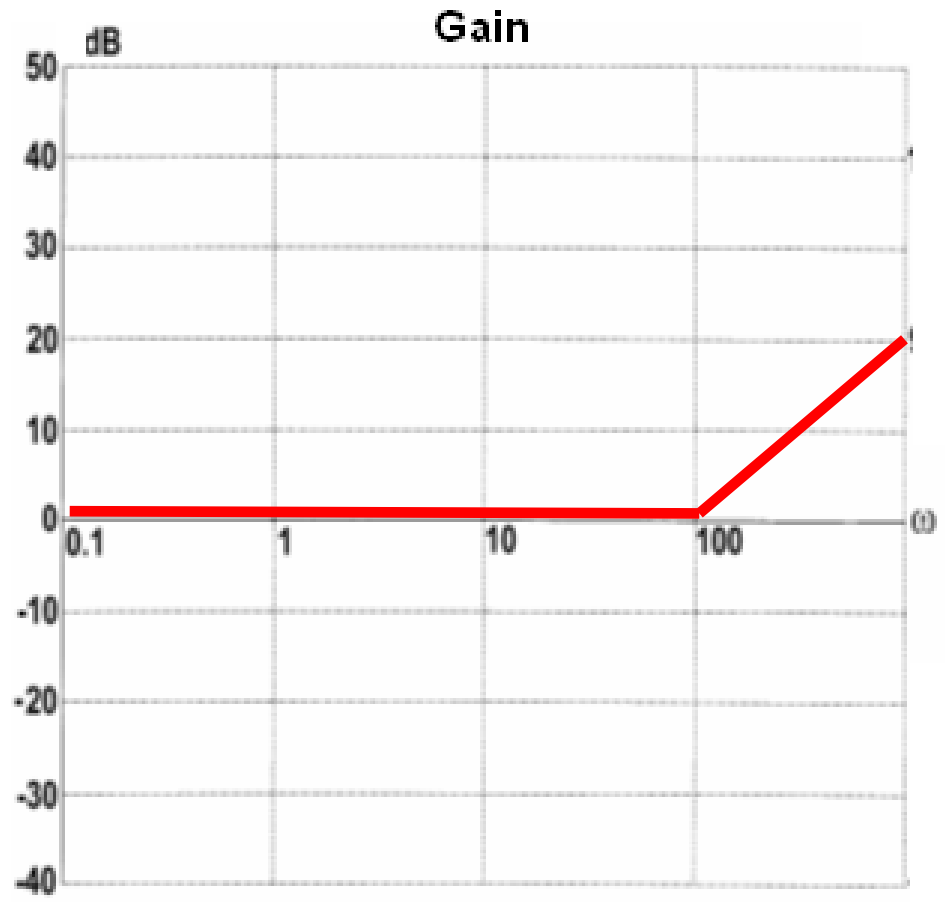
Exercice 1 :

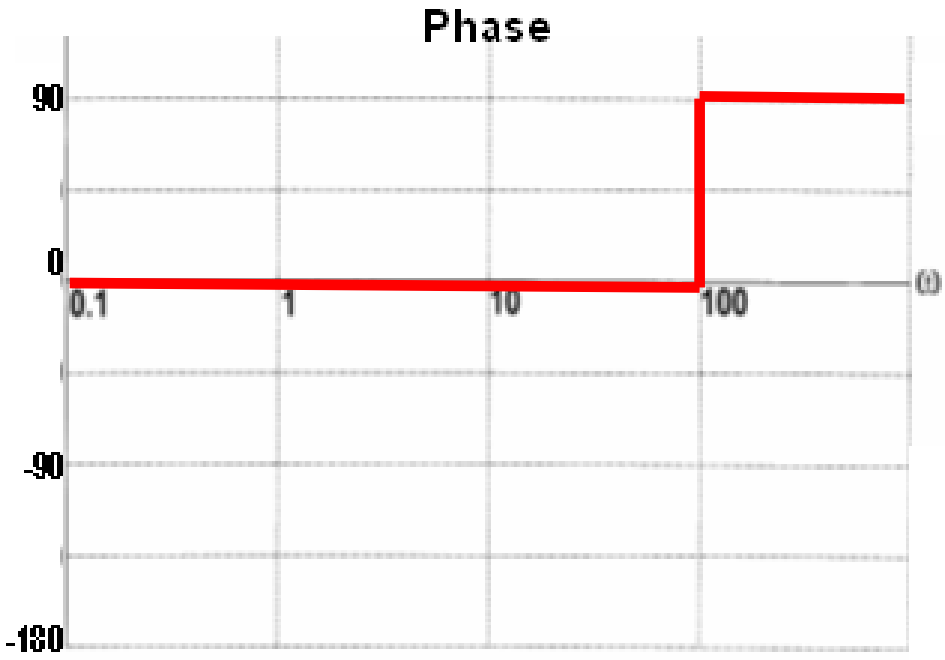
$$H(p) = \frac{10}{(1+0,1p)}$$



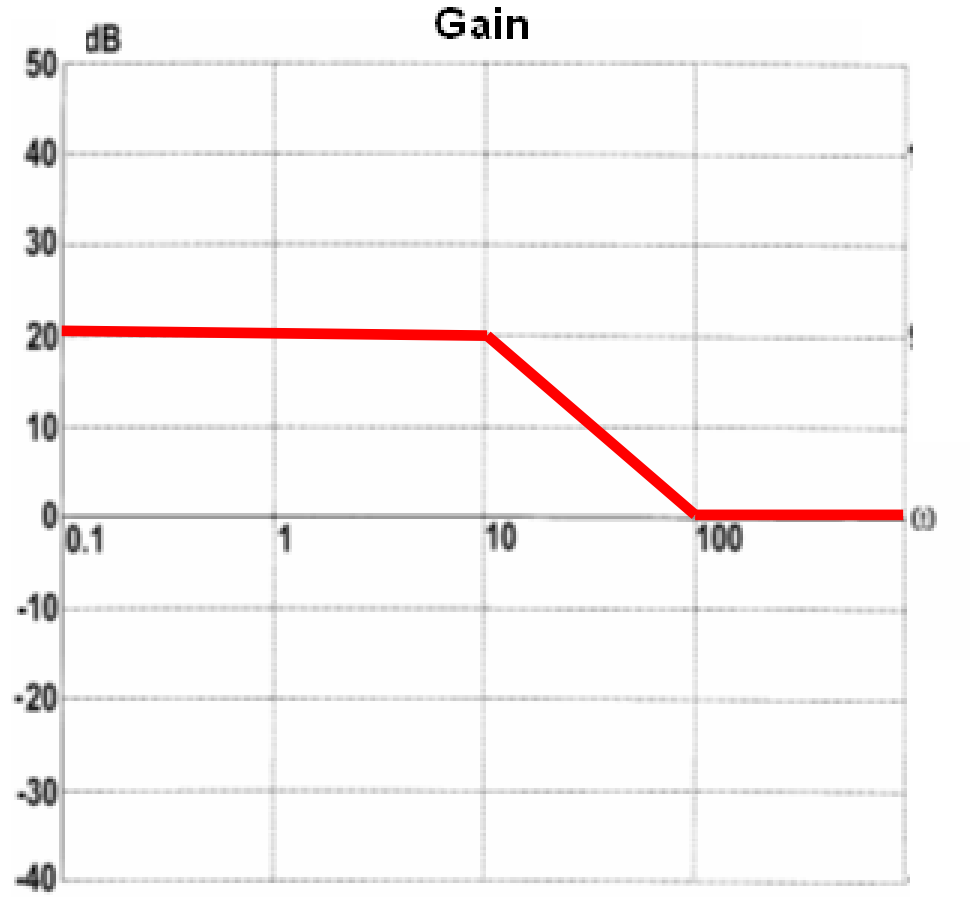


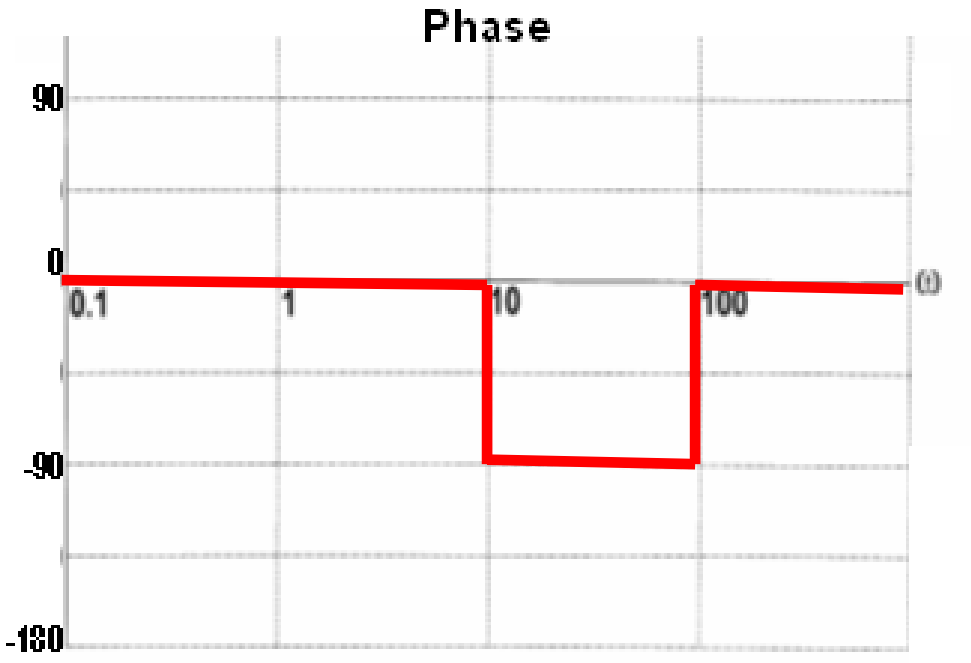
$$H(p) = (1 + 0,01p)$$


Gain
dB
50
40
30
20
10
0
-10
-20
-30
-40
0.1
1
10
100
ω

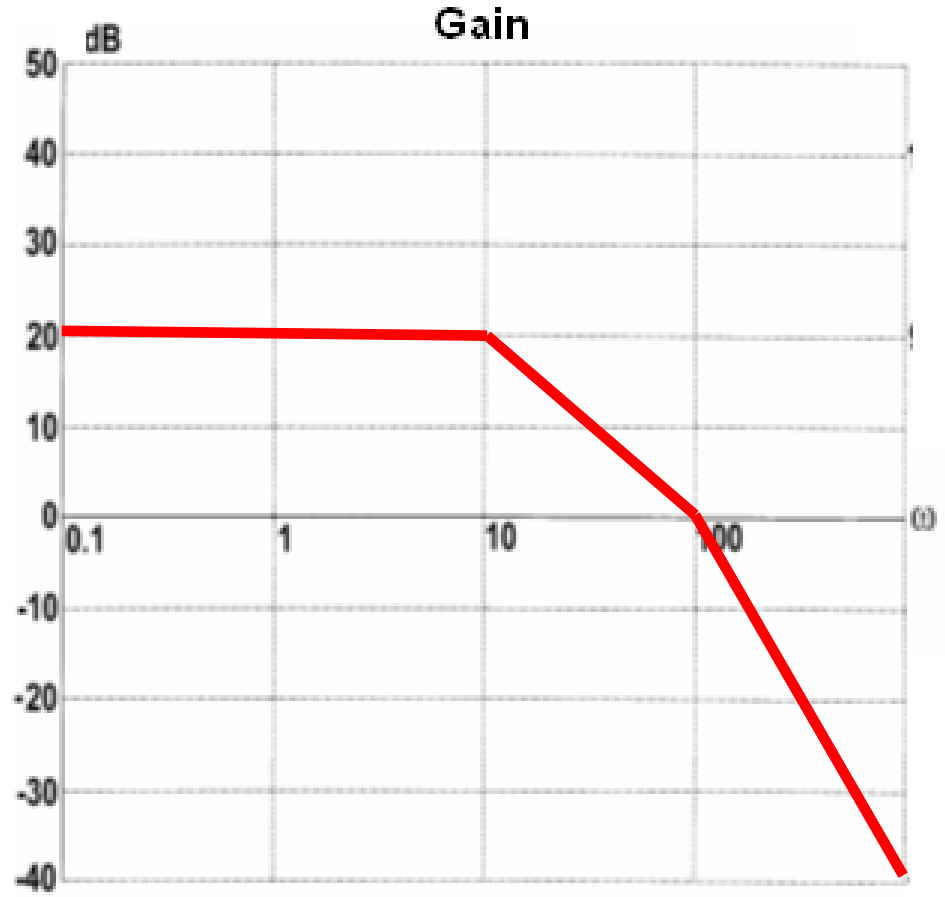

Phase
90
0
-90
-180
0.1
1
10
100
ω

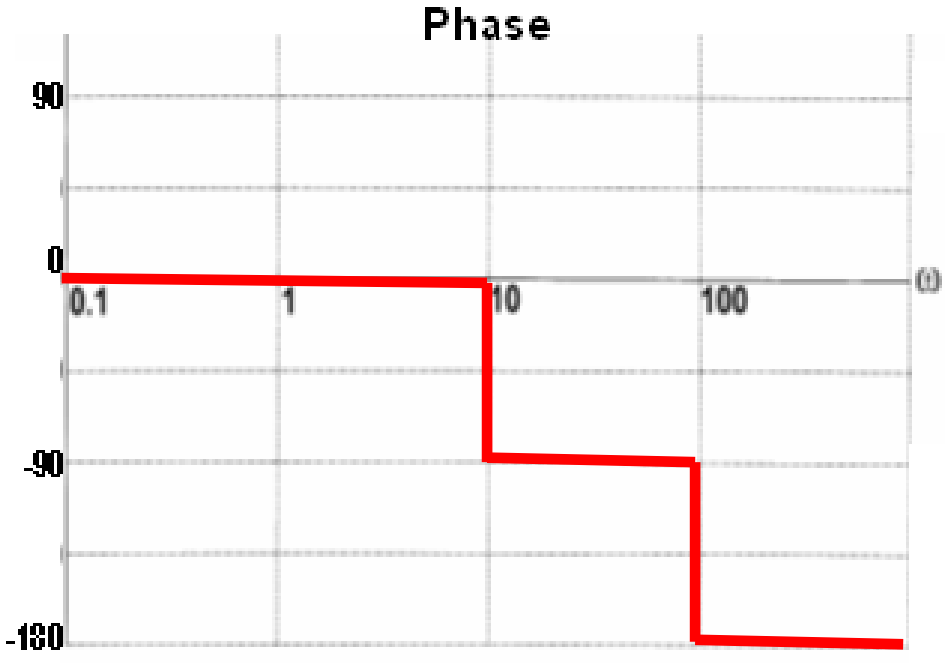
$$H(p) = 10\frac{(1+0,01p)}{(1+0,1p)}$$





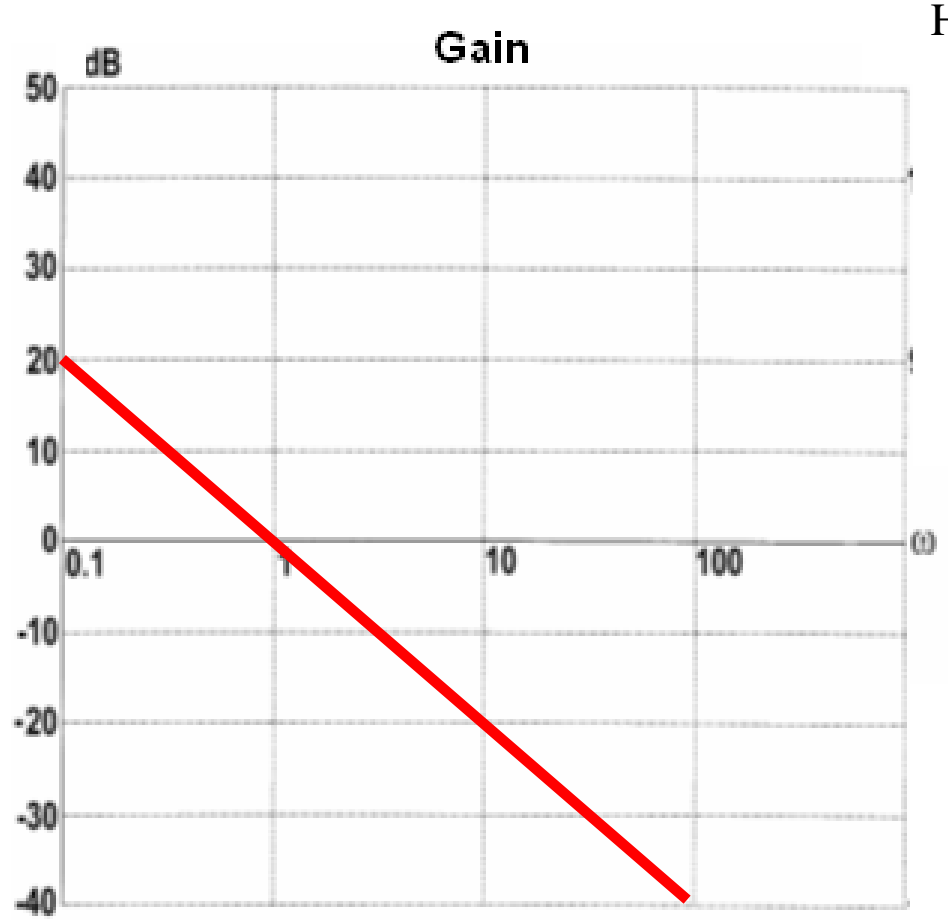
$$H(p) = 10\frac{1}{(1+0,1p)(1+0,01p)}$$

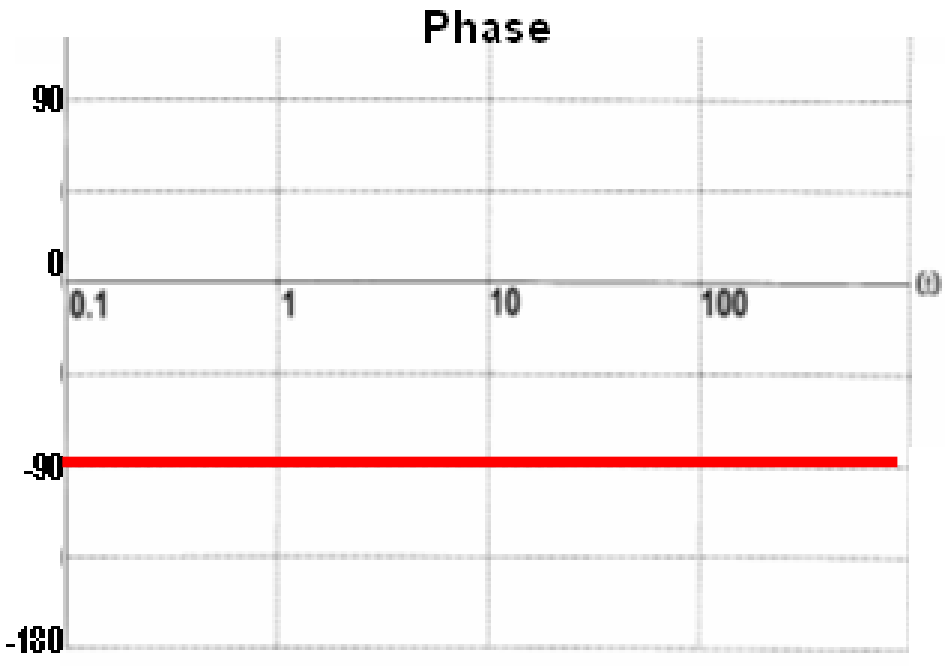




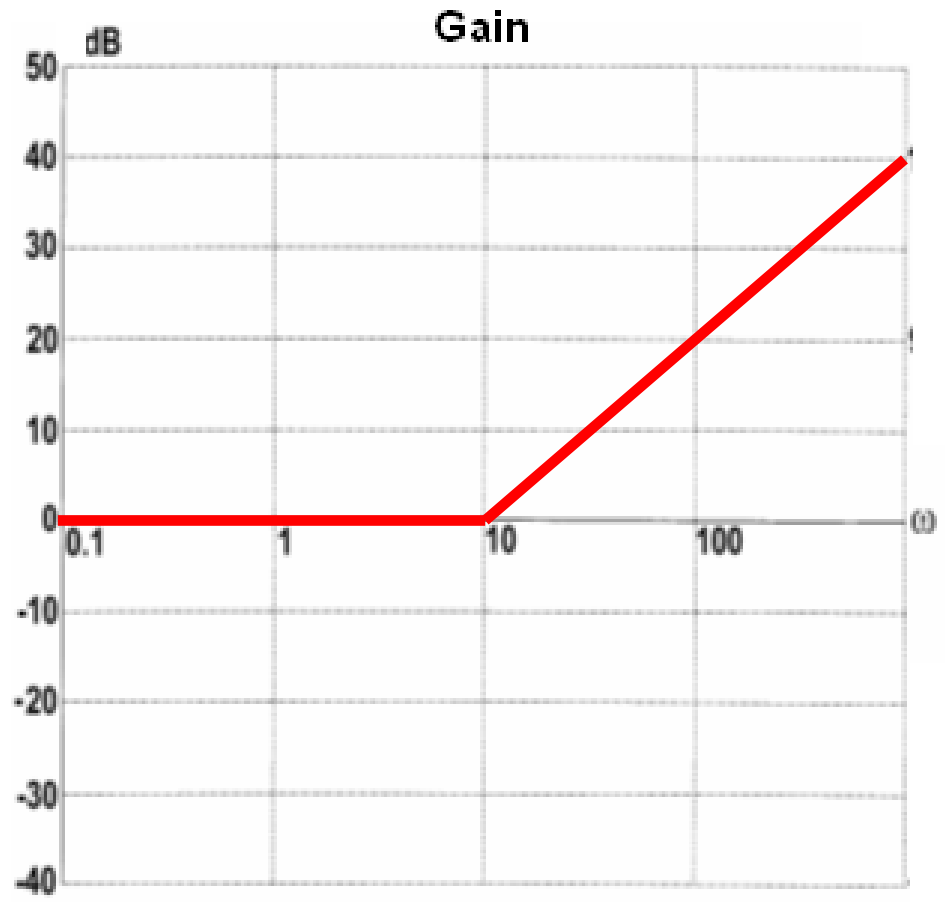
Exercice 2 :

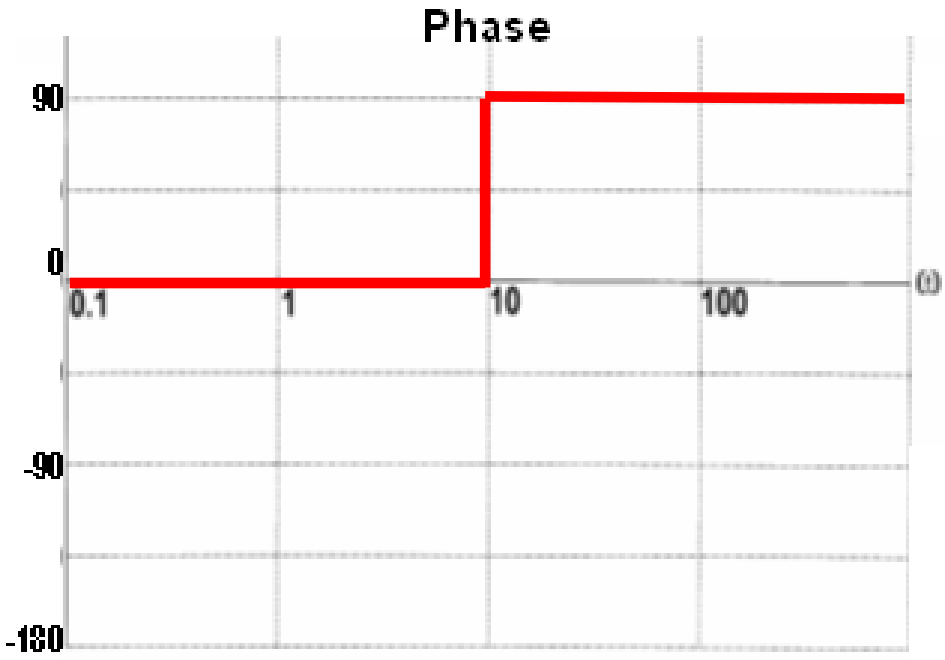
$$H_1(p) = \frac{1}{p}$$


Gain
dB
50
40
30
20
10
0
-10
-20
-30
-40
0.1
1
10
100
ω

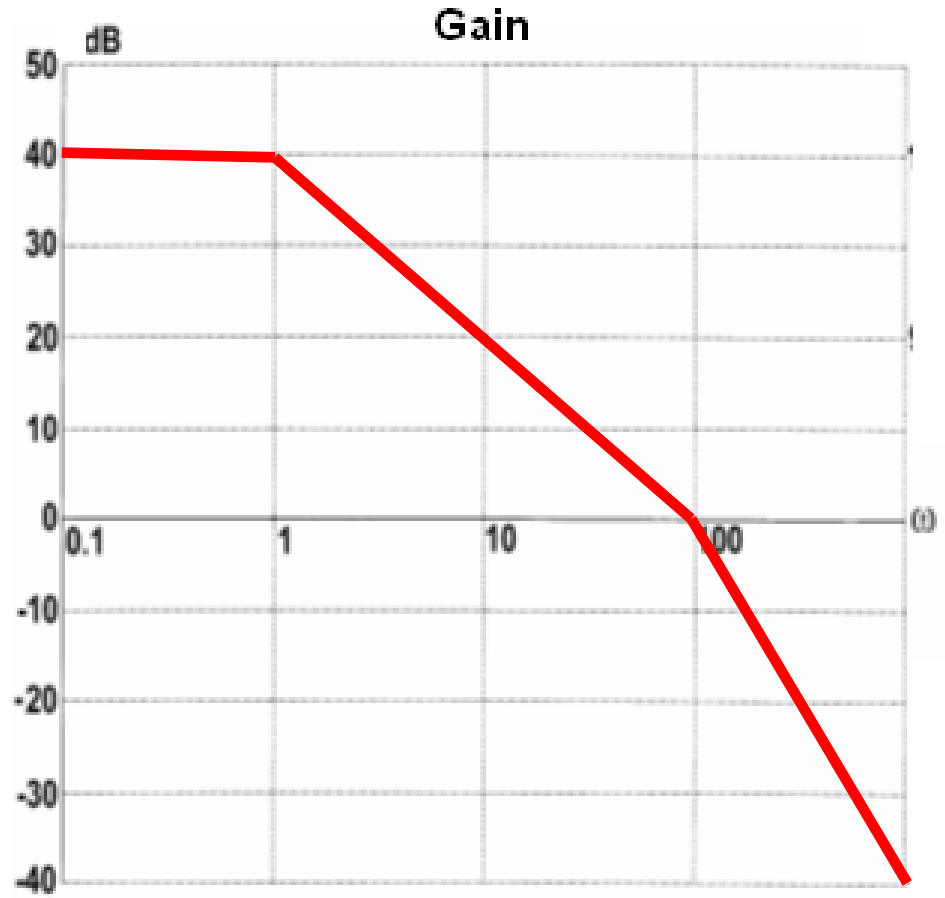

Phase
90
0
-90
-180
0.1
1
10
100
ω

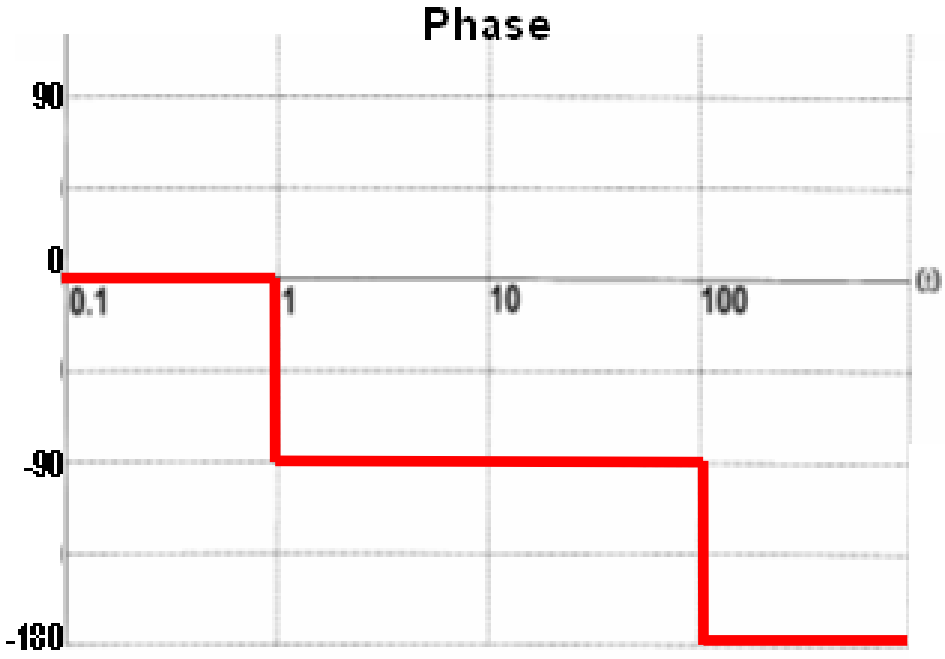
$$H_2(p) = (1 + 0{,}1p)$$


Gain
dB
50
40
30
20
10
0
-10
-20
-30
-40
0.1
1
10
100
ω

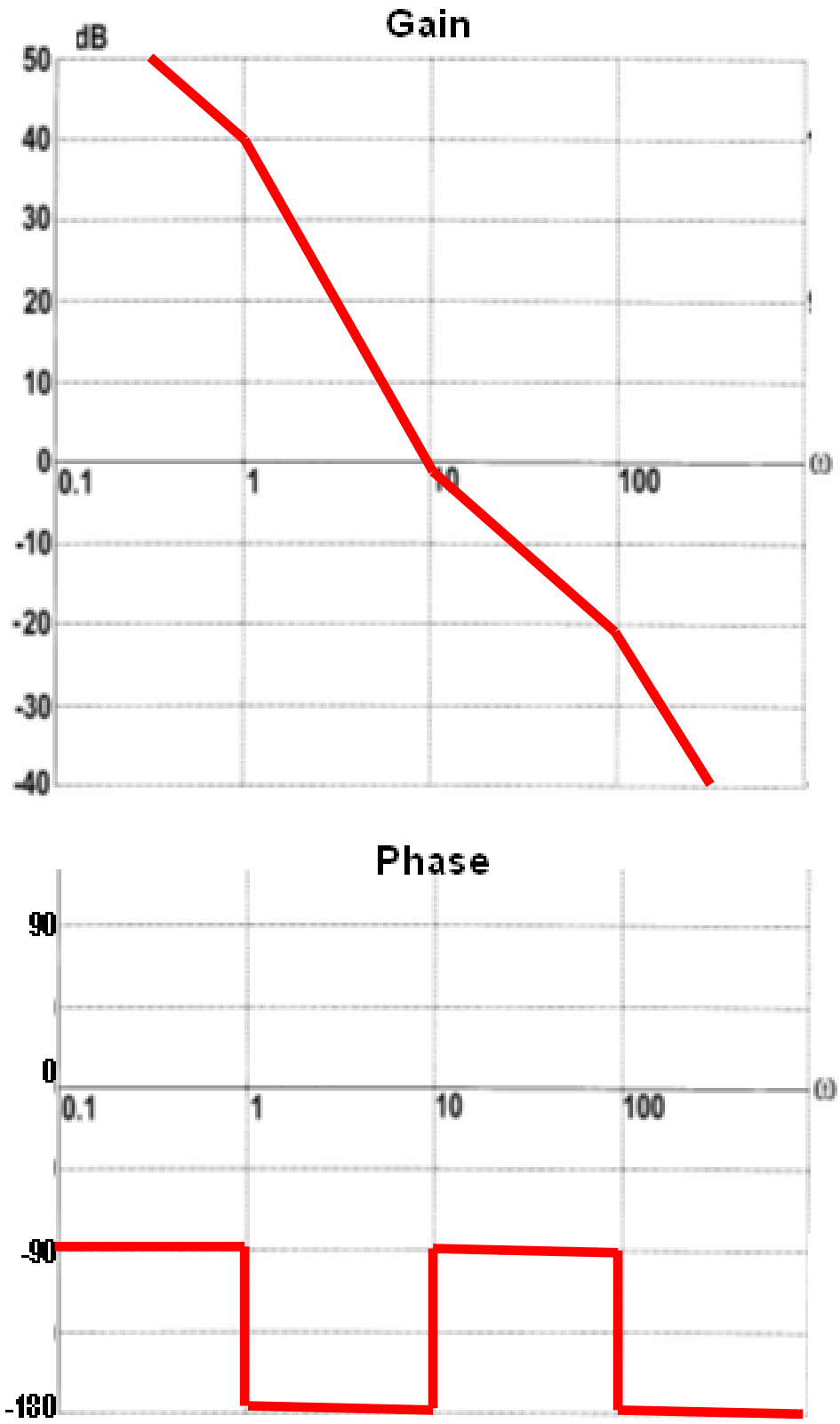

Phase
90
0
-90
-180
0.1
1
10
100
ω

$$H_3(p) = \frac{100}{\left(\frac{p^2}{100} + \frac{101}{100}p + 1\right)} = \frac{10000}{(p+100)(p+1)}$$



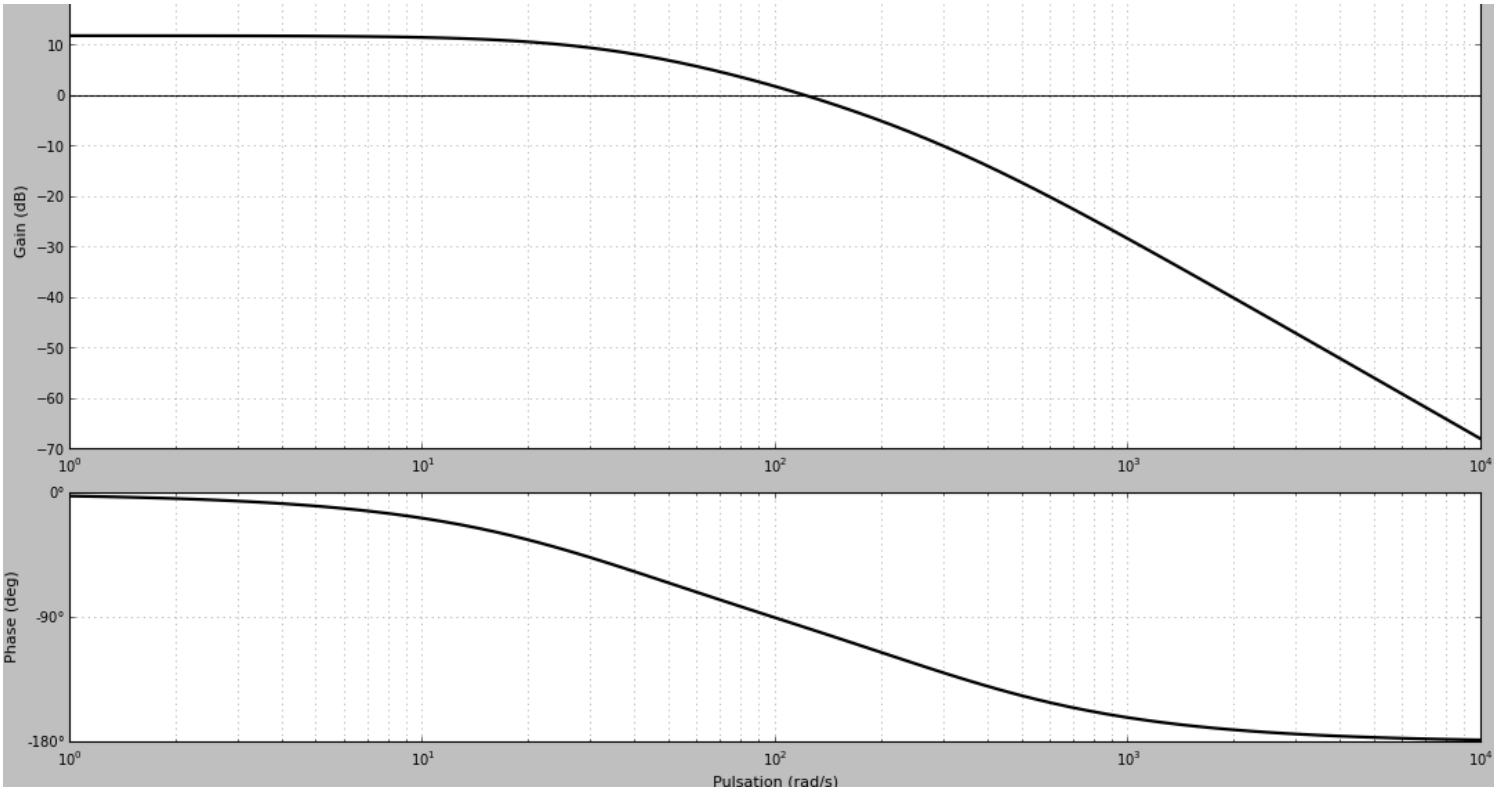


$$H(p) = \frac{1000}{p} \frac{(p+10)}{(p^2+101p+100)}$$

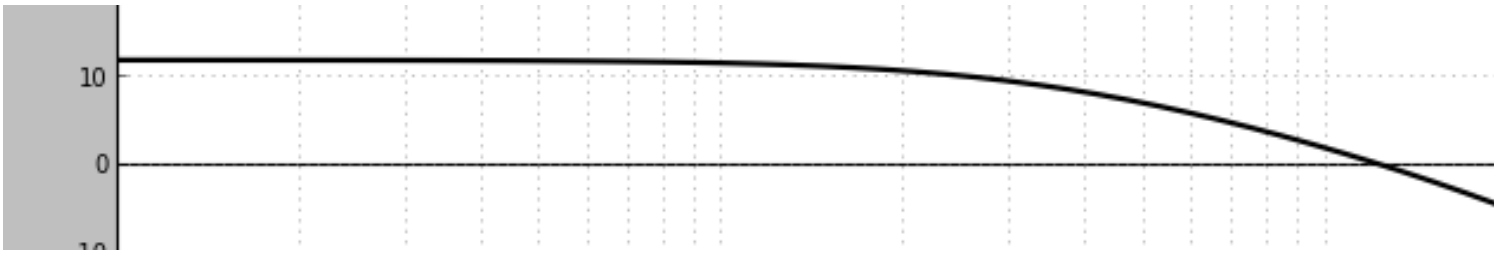


Exercice 3 : A partir des diagrammes fournis, identifiez les fonction de transfert correspondantes

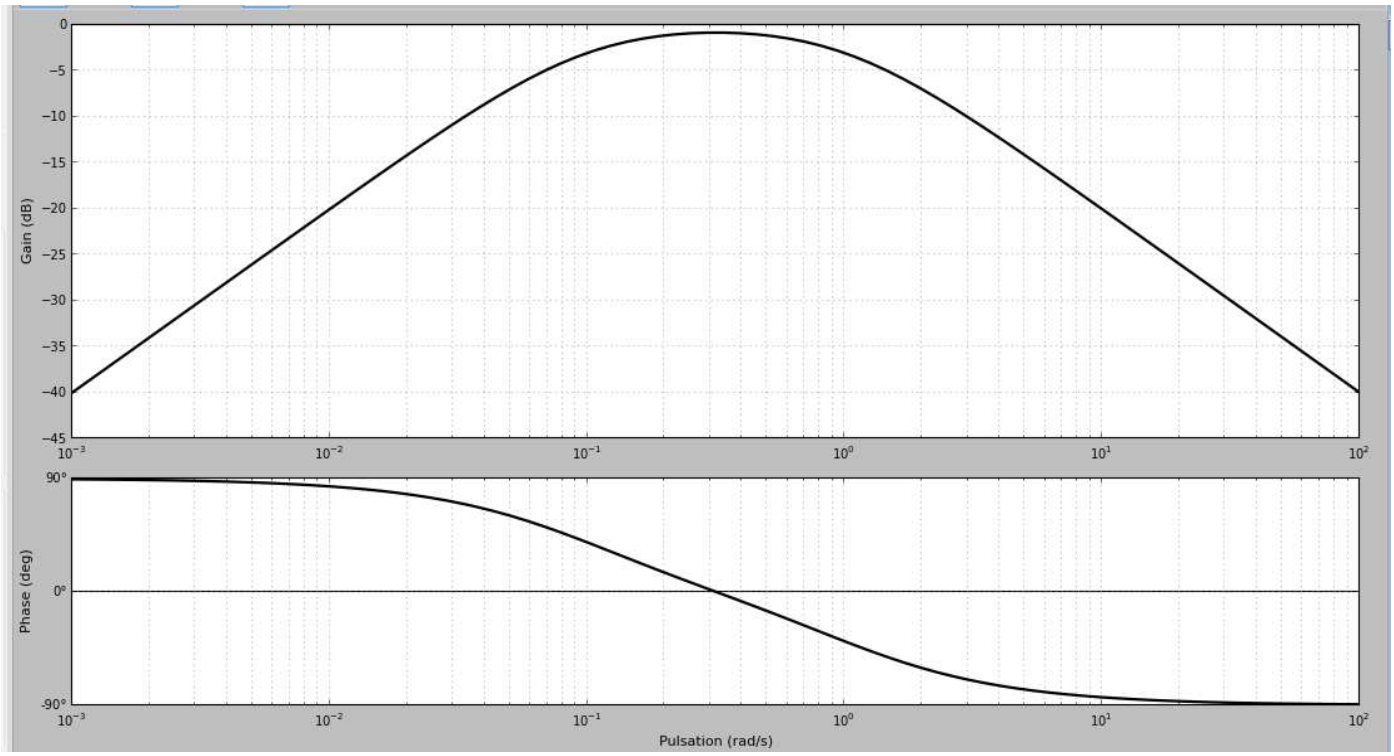
Cas 1 :



zoom



Cas 2 :


Gain (dB)
0
−5
−10
−15
−20
−25
−30
−35
−40
−45
Phase (deg)
90°
0°
-90°
10^{-3}
10^{-2}
10^{-1}
10^{0}
10^{1}
10^{2}
Pulsation (rad/s)

Zoom