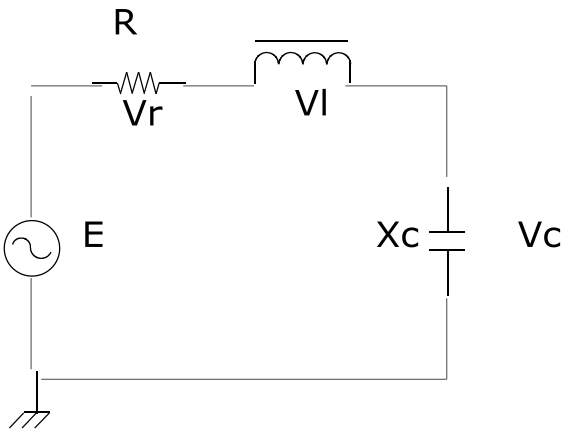
E025 Online Test

Ref 17

For the given series resonance circuity, find I, Vr, Vl and Vc. If the resonance frequency is 4000Hz, Find the bandwidth . What power dissipated in circuit.

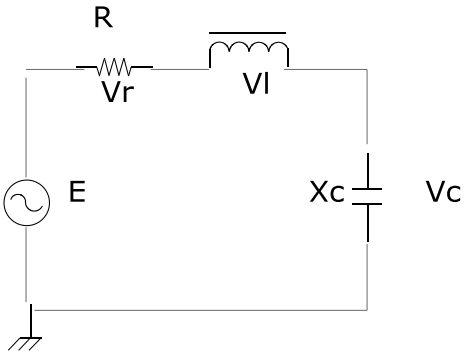


E = 10 ∠0 V R= 2 Ohm, X l= 10 ohm, Xc= 10 ohm

A	I = 10 Angle 0 amp, Vr= 5V, Vl= 5 Angle 90V, Vc= 50 Angle +90 V	B	I = 5 Angle 0 amp, Vr= 10V, Vl= 10 Angle 90V, Vc= 50 Angle -90 V
C	I = 10 Angle -90 amp, Vr= 10V, Vl= 10 Angle 0V, Vc= 50 Angle +90 V	D	I = 10Angle 0 amp, Vr= 10V, Vl= 10 Angle 90V, Vc= 50 Angle -90 V
	Answer		

Ref 18

In the given circuit, Quality factor (Q), Bandwidth of resonant frequency 5000HZ and power dissipated at half power frequency are

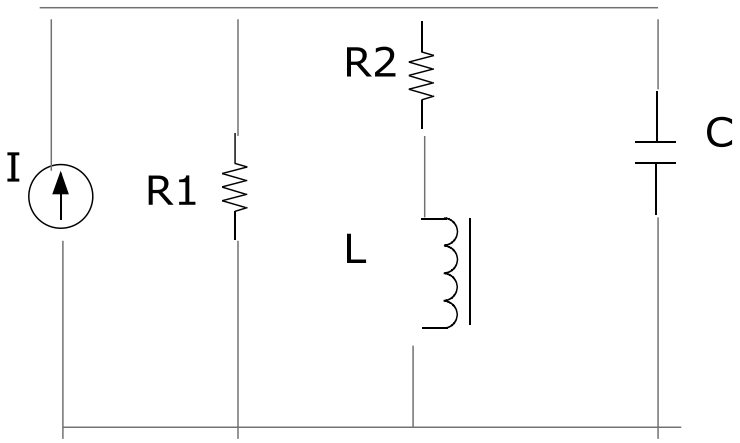


R = 2 ohm, Xl= 10 ohm, Xc= 10 ohm E= 10∠ 0 V

A	Q= 10, BW= 2000HZ, P (HPF)= 50W	B	Q= 15, BW= 2000HZ, P (HPF)= 50W
C	Q= 5, BW= 1000HZ, P (HPF)= 25W	D	Q= 20, BW= 3000HZ, P (HPF)= 25W
	Answer		

Ref 19

Q9. For the given network with fp provided.



R 1 = 40 KΩ, R 2= 10 Ω, , L = 1mH, fp = 0.04MHz

(a)Determine Ql

(b)Determine Rp

(c) Calculate Z tp

(d) Find C at resonance

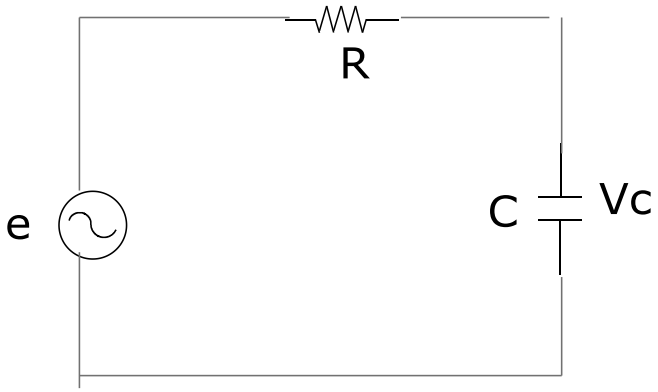
(e) Find Qp

(f) Calculate BW

A	Q= 100, Rp= 10 KΩ, Ztp= 10KΩ C = 20 nF, Qp= 50, BW= 1KHz	B	Q= 25.12, Rp= 6.31 KΩ, Ztp= 5.45 KΩ C = 15.9 nF, Qp= 21.68, BW= 1.85 KHz
C	Q= 50, Rp= 12 KΩ, Ztp= 7 KΩ C = 20 µF, Qp= 30, BW= 2KHz	D	Q= 25.12, Rp= 6.31 KΩ, Ztp= 5.45 KΩ C = 15.9 µF, Qp= 21.68, BW= 1.85 KHz
	Answer		

Ref 20

The input voltage to the given circuit is $e = 12 + 10 \sin 2t$



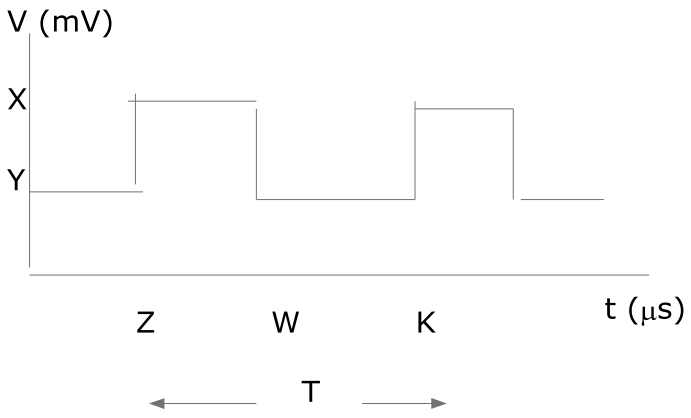
R = 3 Ω, C = 1/8 F

The effective value of current (I) , Vc and the power dissipated in the circuit are

A	I = 3 amp, Vc= 13.67 V, P eff= 6 w	B	I = 1.4142 amp, Vc= 20 V, P eff= 12 w
C	I = 2 amp, Vc= 20 V, P eff= 12 w	D	I = 1.4142 amp, Vc= 13.67 V, P eff= 6 w
	Answer		

Ref 21

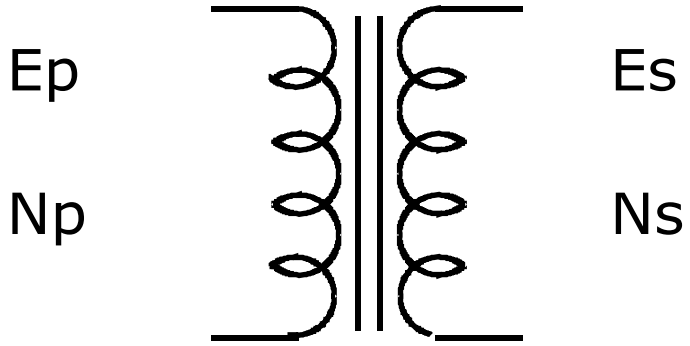
Determine the average value for given periodic pulse waveform.



X= 8 , Y = 2 , Z = 2, W = 6 , K = 12

A	3 mV, 10 sec	B	8 mV, 1 sec
C	4.4 mV, 0.4 sec	D	8 mV, 0.4 sec
	Answer		

Ref 22

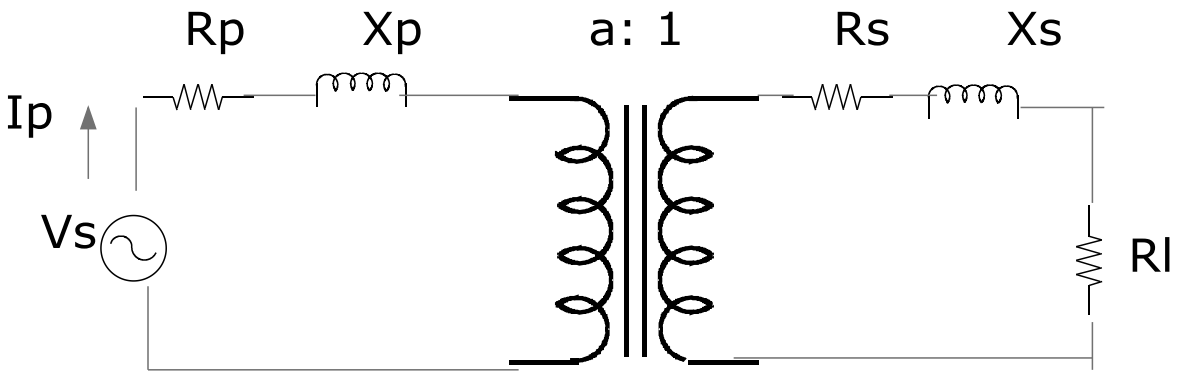


Ep= 200 V, Np= 50 , Es = 240V , Ns = ?

In the given transformer, maximum flux and secondary turn are

A	30mwb, 300 Turns	B	15.02mwb, 600 Turns
C	70mwb, 300 Turns	D	15mwb, 1000 Turns
	Answer		

Ref 23



Ip = 10A, Rp=1 Ω, Xp=2 Ω a= 2, Rs= 1 Ω, Xs= 2 Ω Rl = 50 Ω

In above circuit, the voltage Vs is

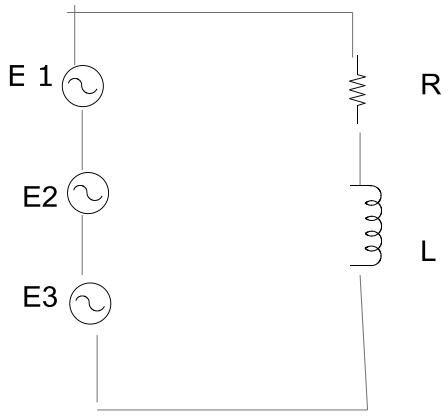
A	300V	B	1000V
C	2452V	D	5000V
	Answer		

Ref 24

If the system has a voltage gain of 36dB and output voltage 6.8V, the input voltage is

A	3V	B	0.107V
C	0.8V	D	10V
	Answer		

Ref 25

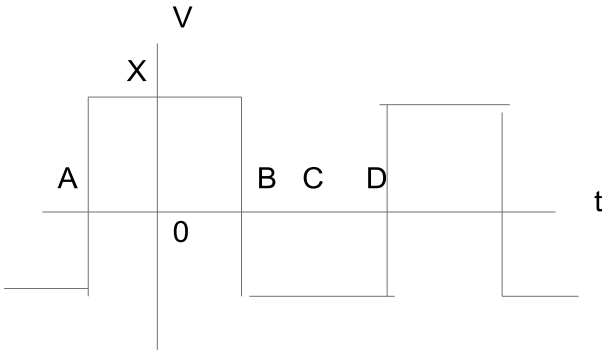


E1= 25V, E2= 80 sinwt, E3= 20 sin 3wt R= 20 Ω, L = 0.2H

Total power dissipated in the given circuit is

A	100W	B	200W
C	53.5W	D	0.1W
	Answer		

Ref 26



V = 100V, A= -Π/4 , B= Π/2 , C= Π , D= 3 Π/2

The first four terms of the given trigonometric Fourier series are

A	0 +0 + 0 –+400/ 3 Π cos3 Θ	B	400/ Π +400/ Π cos Θ + 400/ 2 Π cos2 Θ – 400/ 3 Π cos3 Θ
C	0 + 400/ Π cos Θ + 0-400/ Π cos3 Θ	D	400/ Π +0 + 0+ 400/ 3 Π cos3 Θ
	Answer		