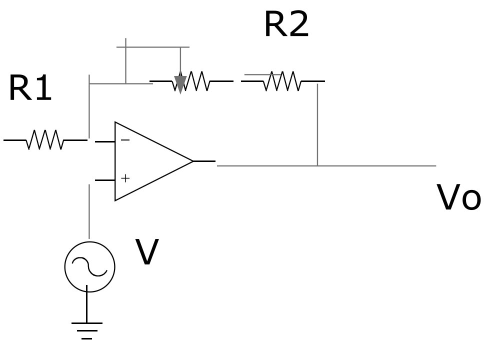
H045 Online Test

Ref489



R1=1 KΩ, R2= 10KΩ V = 10 mV

In given inverting amplifier, what is minimum voltage gain?

A	10	B	9
C	12	D	11
	Answer		

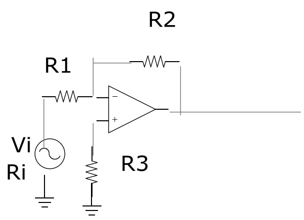
Ref490

Non inverting amplifier , voltage gain is 20. Input 10mV P-P, 10% to 90% rise time. 3.5µs. Input is increased to 1V, out put is increased from 10 to 90% & rise time is increased to 12.8µs.

Calculate (a) Bandwidth (b) Rise time (c) Gain bandwidth product.

A	100 KHZ, 0.625µS, 1 MHZ	B	200 KHZ, 1.25µS, 2 MHZ
C	300 KHZ, 2.5µS, 3 MHZ	D	
	Answer		

Ref491



R1= 1 KΩ , R2=100 KΩ, R3= 1.57 KΩ Ri = 600 Ω. Offset current is 2 mA

Out put dc voltage is

A	1 mV	B	0.5 mV
C	3 mV	D	2 mV
	Answer		

Ref492

Bias compensated Op-Amp, Rf = 100 K Ω , Ri = 1600 Ω , Drift V_{IO}=30 µV/ °C. Drift I_o=300 PA/ Z. Null at 20°C . Find dc offset at 80°C.

A	118mV	B	236 mV
C	59 mV	D	30mV
	Answer		

Ref493

Calculate the full power bandwidth of an Op-amp which has a slew rate 0.2 V/µS and works with +/- 15 V power supply.

A	4 KHZ	B	18 KHZ
C	27 KHZ	D	9.1 KHZ
	Answer		

Ref494

Noise density 15 nV/ √HZ . Find noise voltage over a bandwidth 30KHz.

A	1.3 µV rms	B	2.6 µV rms
C	3.9 µV rms	D	5.2 µV rms
	Answer		

Ref495

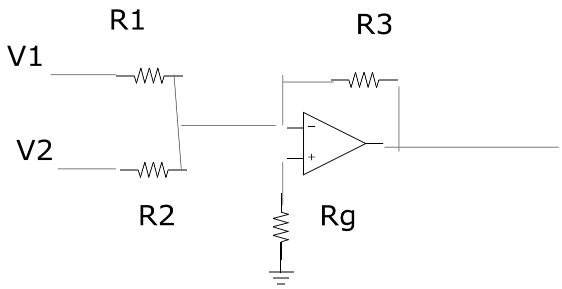
Op-amp circuit. The source resistance is 30 KΩ. The thermal noise due to the source resistance is 2.8 μV. The internal noise current of op-amp is 60 PA and the internal noise voltage of the op-amp is 4.1 μV.

(a) What is the total equivalent input noise voltage?

(b) What will be the new value if bandwidth is tripled?

A	5.3 μV, 9.6 μV	B	10.6 μV, 4.8 μV
C	2.7 μV, 3.2 μV	D	
	Answer		

Ref496



R1= 10 KΩ, R2= 4.7 KΩ, R3 =100 KΩ, Rg = 3.3 KΩ

Rs value is

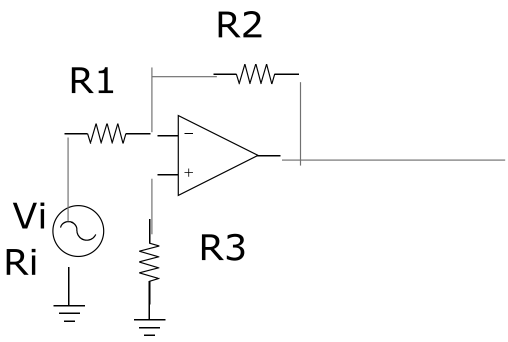
A	12.8 KΩ	B	3.2 KΩ
C	4 KΩ	D	6.4 KΩ
	Answer		

Ref497

The noise voltage equation is

A	Er = √ 4 K T Rs B	B	Er = √ K T Rs B
C	Er = √ 2 K T Rs B	D	Er = √ 1.5 K T Rs B
	Answer		

Ref498



R1 = 4.7 KΩ, R2 = 100 KΩ, R3 = 3.3 KΩ

Calculate (a) Input signal to noise ratio (b) Output signal to noise ratio

A	33.4 dB, 19 dB	B	10 dB, 25 dB
C	66dB, 38 dB	D	66.8 dB, 57.1 dB
	Answer		

Ref499

When the phase angle is less than - 180° , the amplifier is

A	Stable	B	Unstable
C		D	
	Answer		

Ref500

If phase margin is less than45°, the system is

A	Critical damp	B	Over damp
C	Underdamp	D	
	Answer		