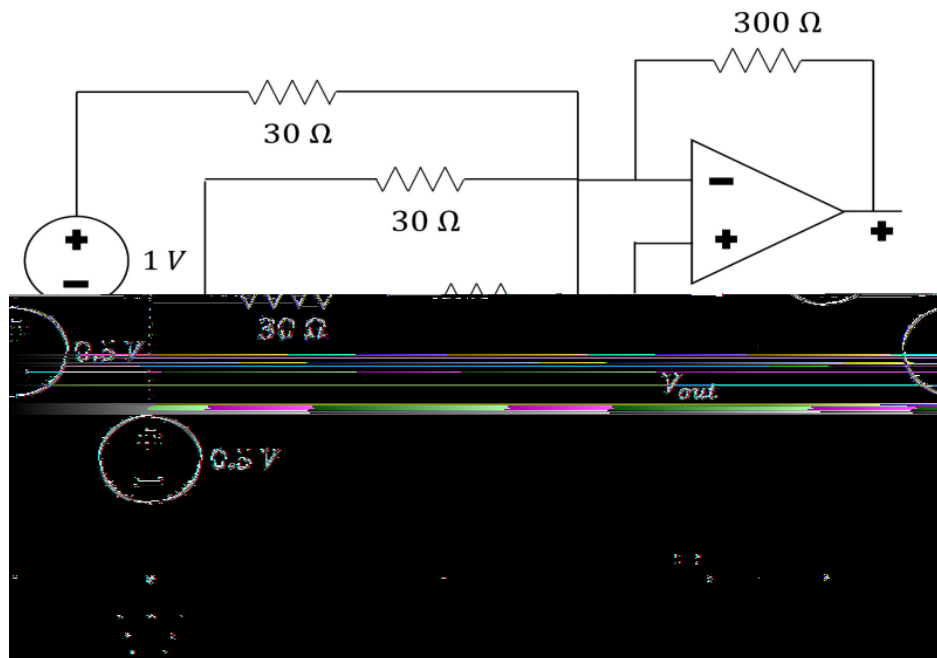# Homework 5
ECE2004 CRN:12898
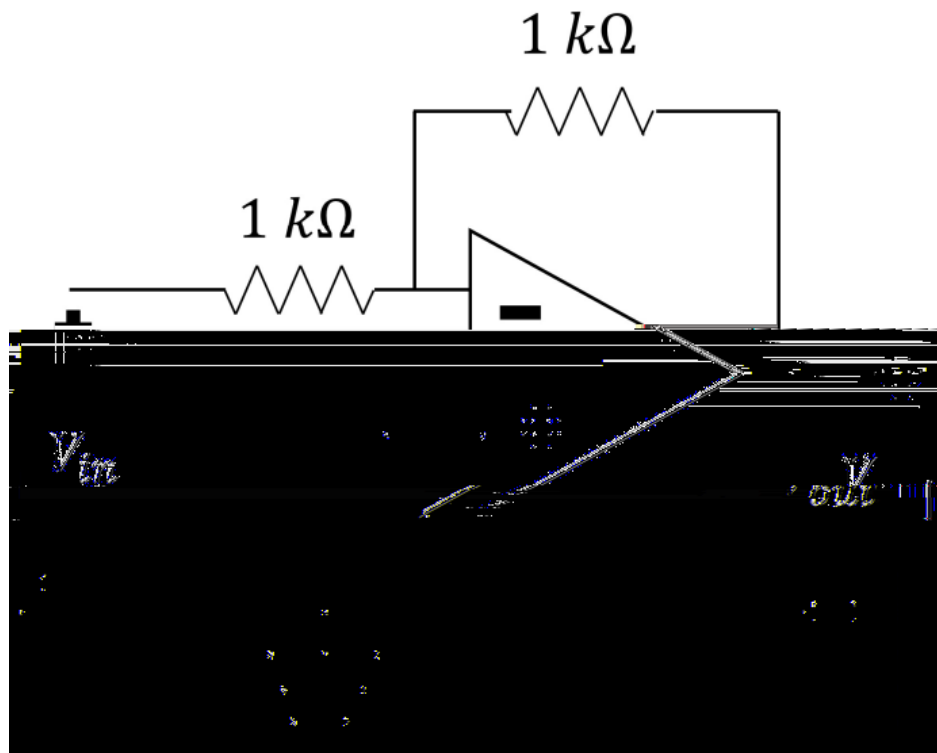
Jacob Abel

March 23, 2018

Question 1:

A) Solve for V_{out}.

$V_{out} = -\frac{300\Omega}{30\Omega}(1V + 0.5V + 0.5V) = -20V$

B) What type of amplifier circuit is this?
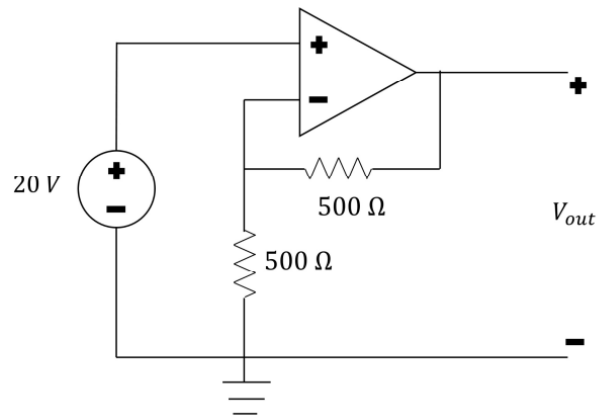
This is an inverting summing amplifier.

Question 2:

A) Solve for the gain of this circuit, $H = \frac{V_{out}}{V_{in}}$.

$H = -\frac{1k\Omega}{1k\Omega} = -1$

B) What type of circuit is this?

This is an inverting amplifier.

Question 3:
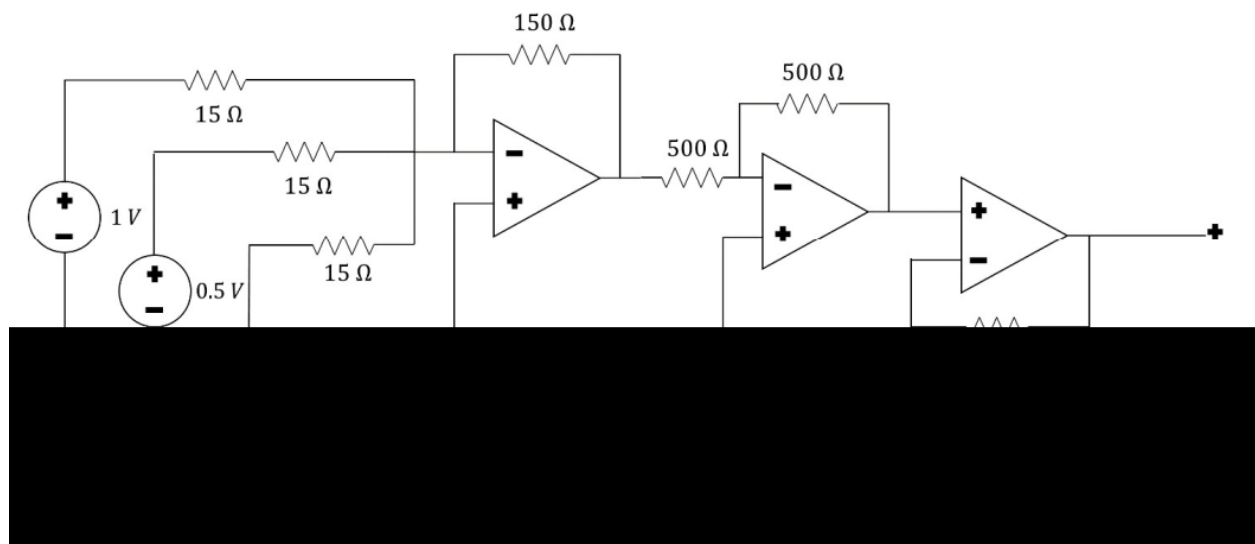

A) Solve for V_{out}.

$V_{out} = (1 + \frac{500\Omega}{500\Omega})20V = 40V$

B) What type of amplifier circuit is this?

This is a non–inverting amplifier.

Question 4: Solve for V_{out}.

$$V_1 = \frac{150\Omega}{15\Omega}(1V + 0.5V + 0.5V) = -20V$$

$$V_2 = -\frac{500\Omega}{500\Omega} \times -20V = 20V$$

$$V_{out} = (1 + \frac{500\Omega}{500\Omega})20V = 40V$$