

# ELECTRICAL CIRCUIT THEORY

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## Task I\_1

An independent sinusoidal voltage generator  $u_1(t) = 2,4\sqrt{2} \sin \omega t$  [V] is connected to the input port of a two-port circuit, shown at the Figure I\_1. Ideal operation amplifier, impedance “matching” transformer (ideal transformer or inductive impedance converter) and controlled sources have been used.

There is also familiar:  $k = 4$ ,  $m = \frac{N_1}{N_2} = 5$ .

Calculate effective value of the output port voltage,  $U_2 = ?$ , (output port 2–0 is not open!).

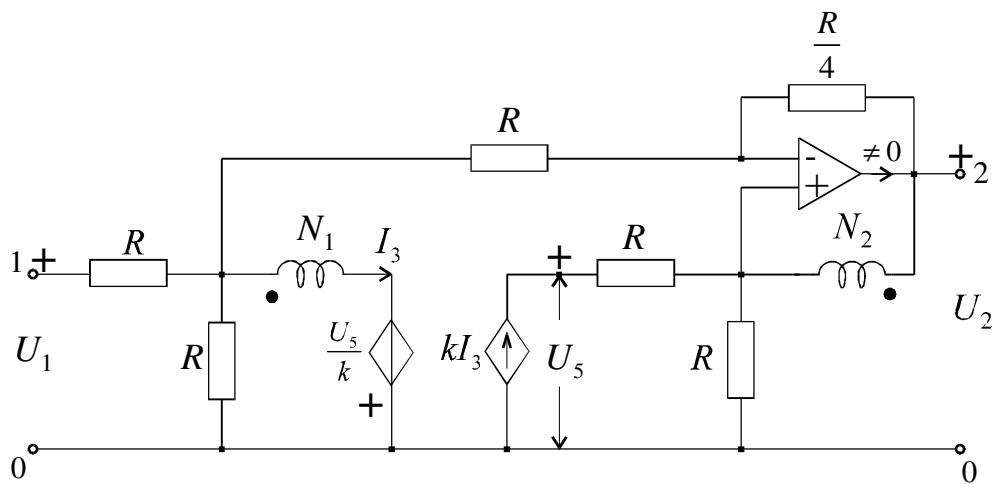


Fig. I\_1