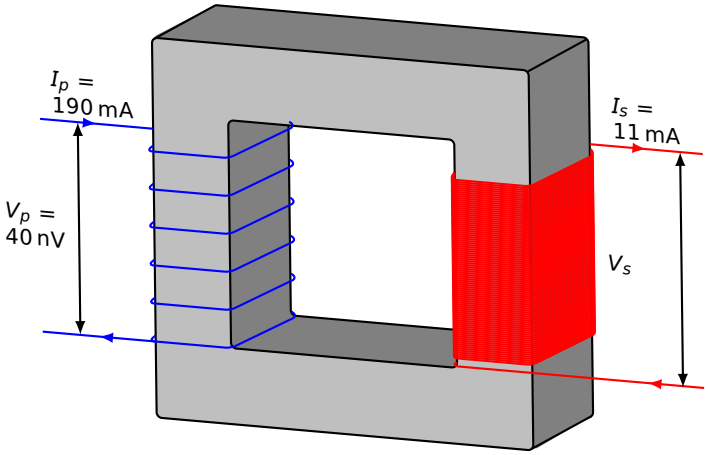
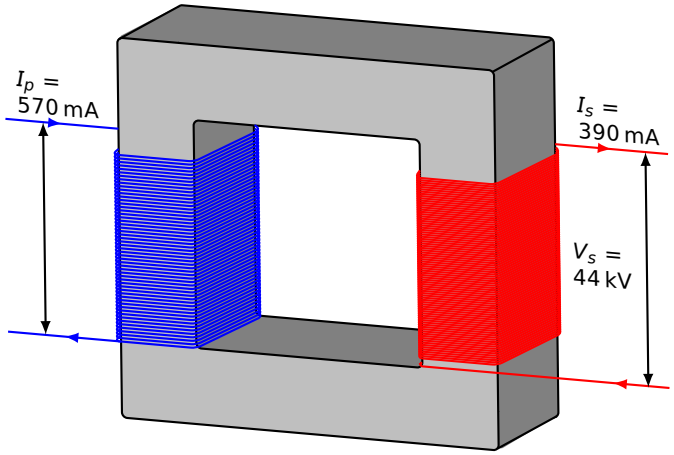
Calculate the potential difference across the primary, V_p or secondary coil V_s. The number of turns *drawn* on the diagram aren't accurate and assume the transformer is 100% efficient;

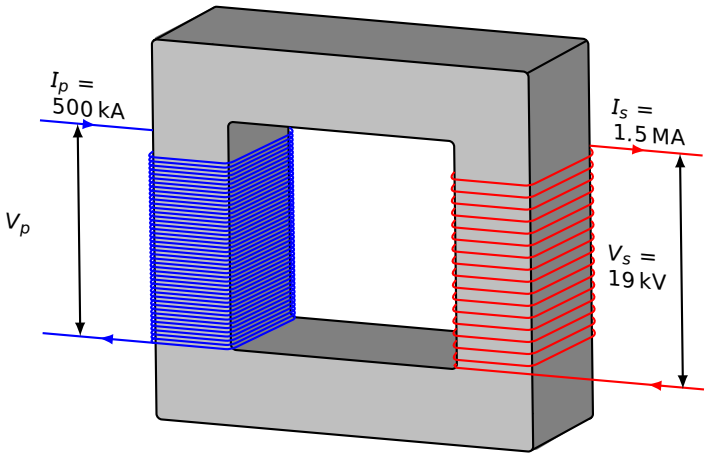
1)



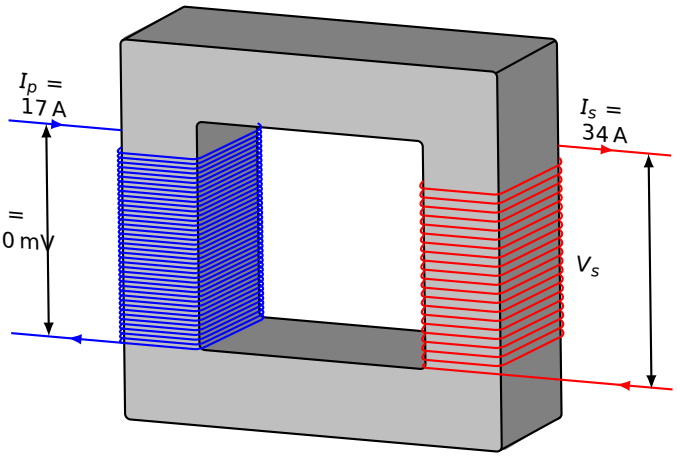
2)



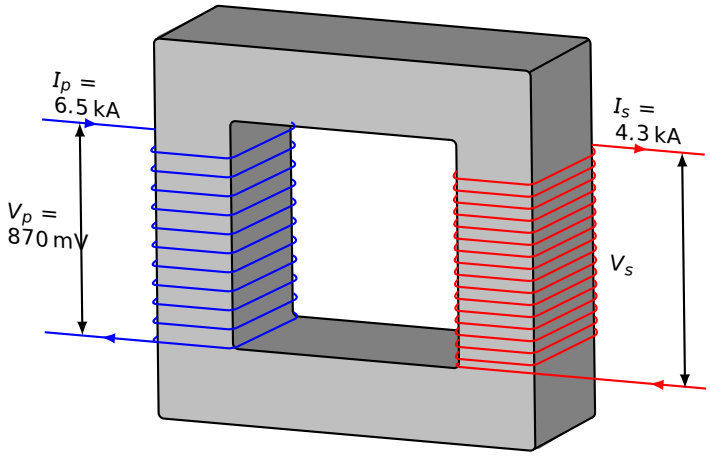
3)



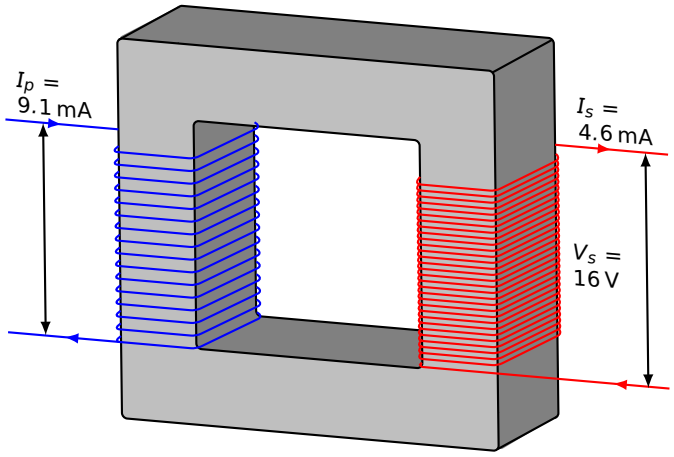
4)



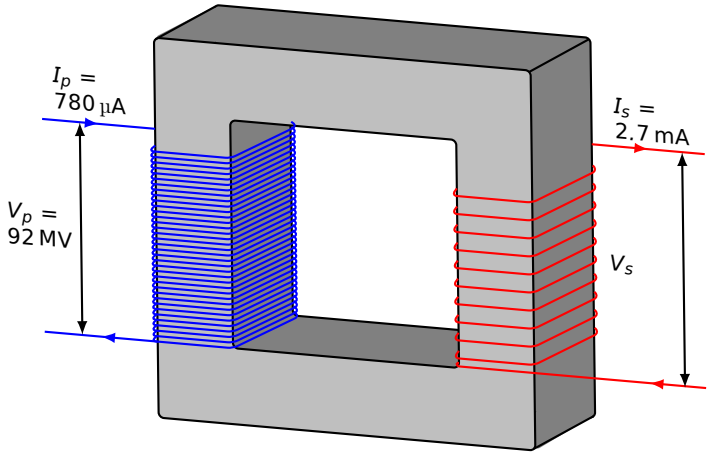
5)


I_p = 6.5 kA
I_s = 4.3 kA
V_p = 870 mV
V_s

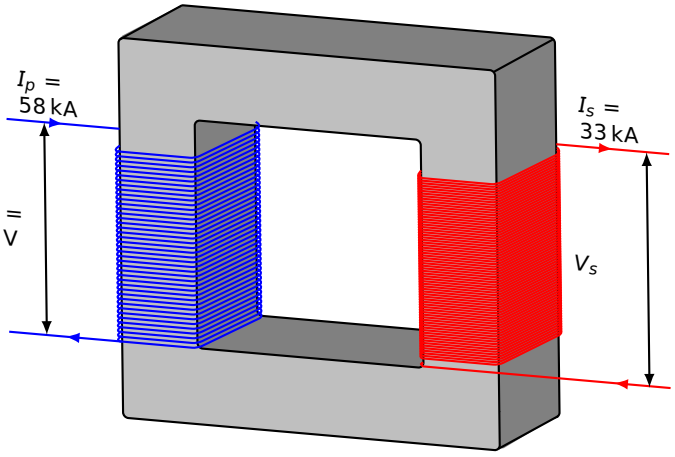
6)


I_p = 9.1 mA
I_s = 4.6 mA
V_p
V_s = 16 V

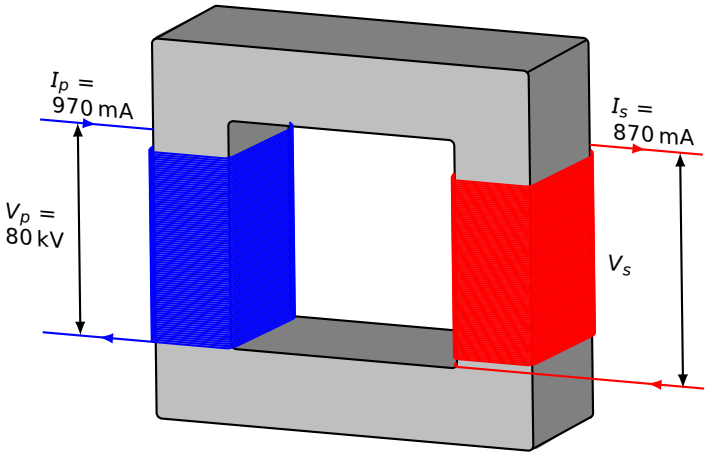
7)


I_p = 780 µA
I_s = 2.7 mA
V_p = 92 MV
V_s

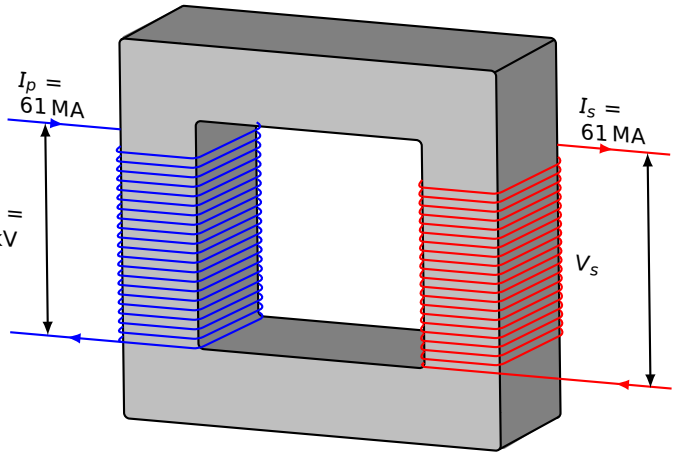
8)


I_p = 58 kA
I_s = 33 kA
V_p = 20 V
V_s

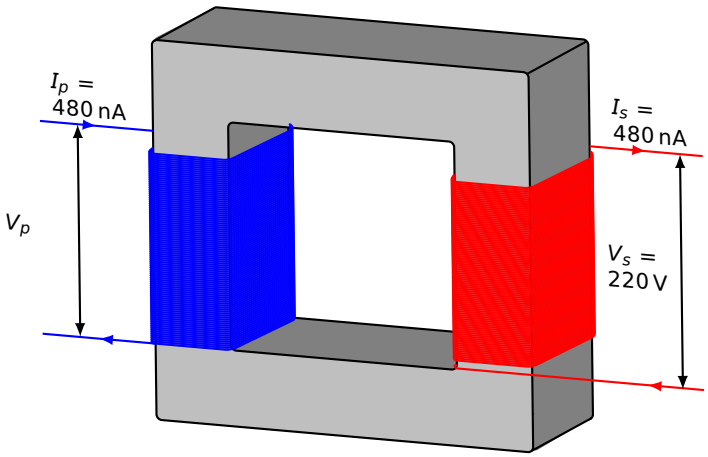
9)


I_p = 970 mA
I_s = 870 mA
V_p = 80 kV
V_s

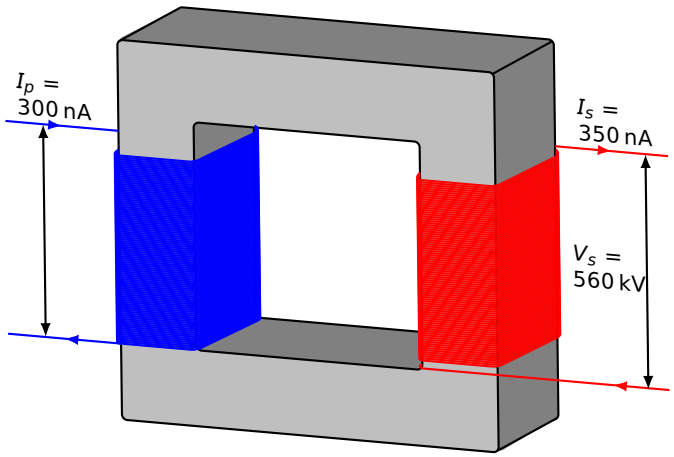
10)


I_p = 61 MA
I_s = 61 MA
V_p = 3 kV
V_s

11)


I_p = 480 nA
I_s = 480 nA
V_p
V_s = 220 V

12)


I_p = 300 nA
I_s = 350 nA
V_p
V_s = 560 kV

Answers

1) $V_s = 720\,\text{nV}$
2) $V_p = 30\,\text{kV}$
3) $V_p = 57\,\text{kV}$
4) $V_s = 260\,\text{mV}$
5) $V_s = 1.3\,\text{V}$
6) $V_p = 7.8\,\text{V}$
7) $V_s = 26\,\text{MV}$
8) $V_s = 35\,\text{V}$
9) $V_s = 89\,\text{kV}$
10) $V_s = 3\,\text{kV}$
11) $V_p = 220\,\text{V}$
12) $V_p = 660\,\text{kV}$