EET 13

$N = 16 \qquad V = (2^N - 1)V_0 \qquad V = 5$

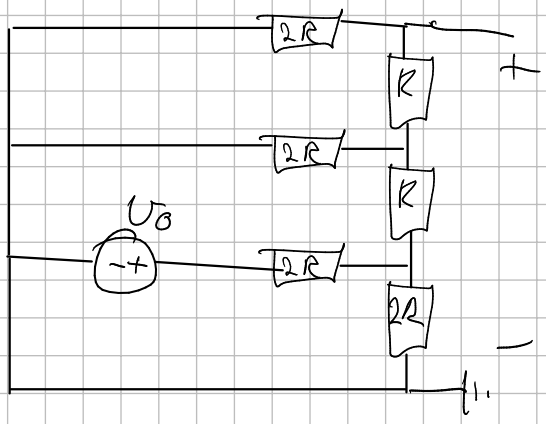
$V = (2^{16} - 1)V_0$

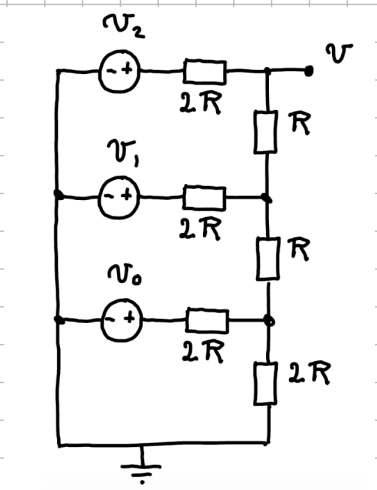
$V_0 = \frac{5}{2^{16} - 1} = 7{,}63 \cdot 10^{-5}$

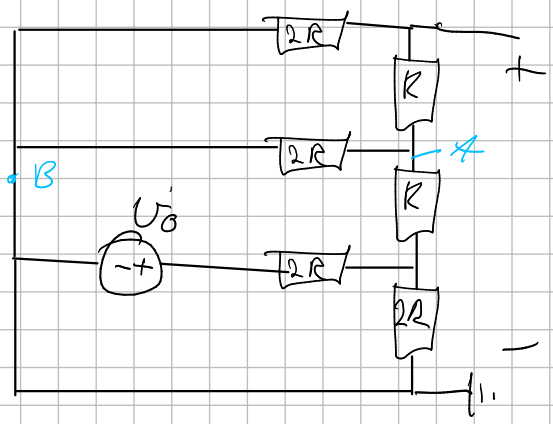
Oppg 7

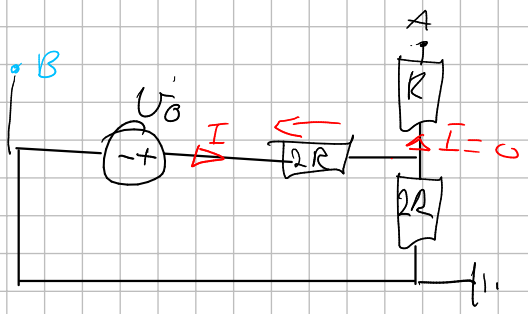
$V_1 = 0$

$V_2 = 0$

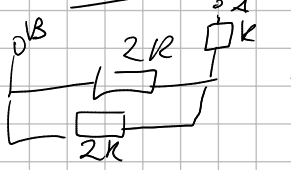




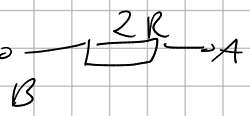




R_{th}:



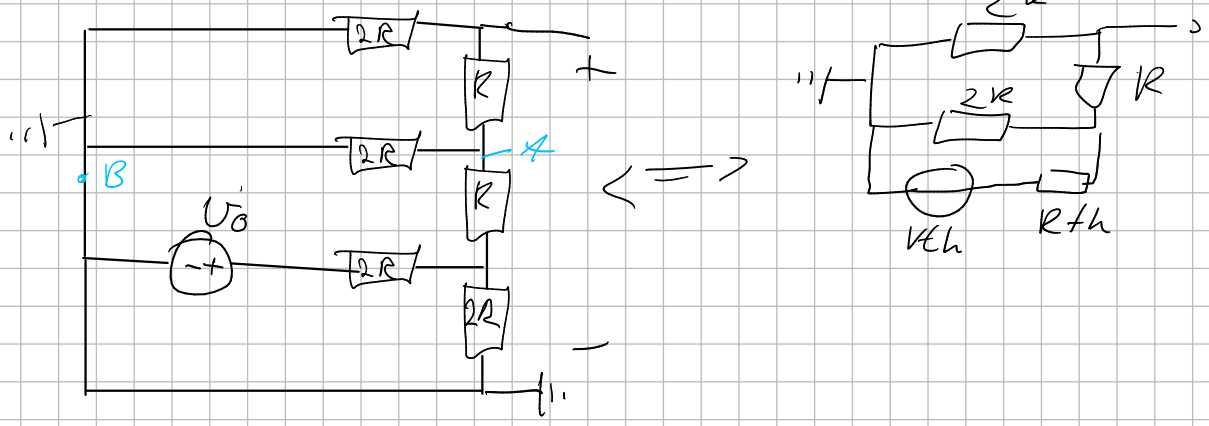
$\Rightarrow$

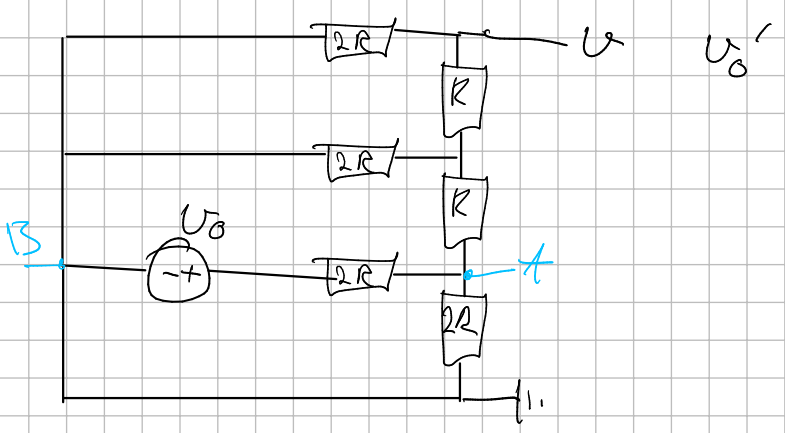


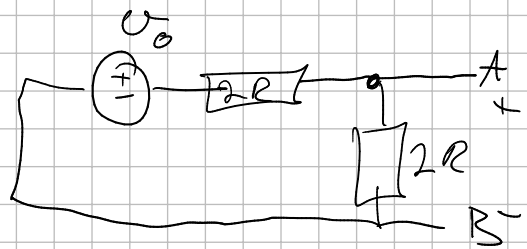
$R_{th} = 2k$

$V_{th} = \frac{V_0}{4R} \cdot 2k$

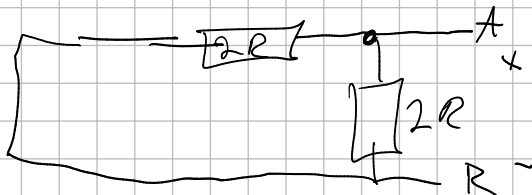
$V_{th} = \frac{V_0}{2}$


2R
R
2R
R
2R
2R
A
B
U_0
+
−
<=>
2R
R
2R
R
V_{th}
R_{th}





$V_0 = 0$



$R_{th} = 1R$

$V_{th} = \frac{1}{2} V_0$

$V_0 = J\,2R + V_{ab}$

$V_{ab} = V_0 - J\,2R$

$V_{ab} = J\,4R - J\,2R$

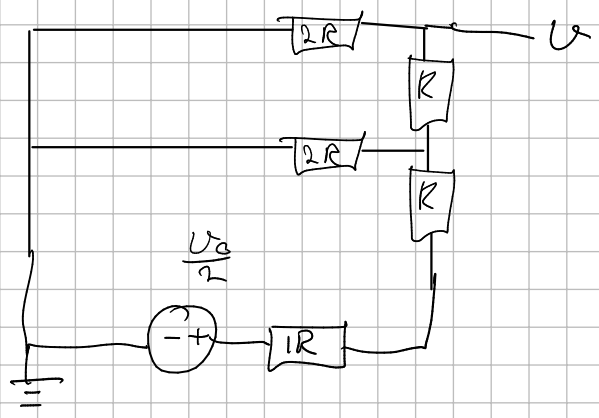
$= J\,2R$

$= V_0 \frac{2R}{4R}$

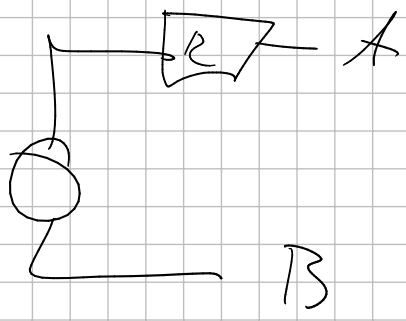
$= \frac{V_0}{2}$

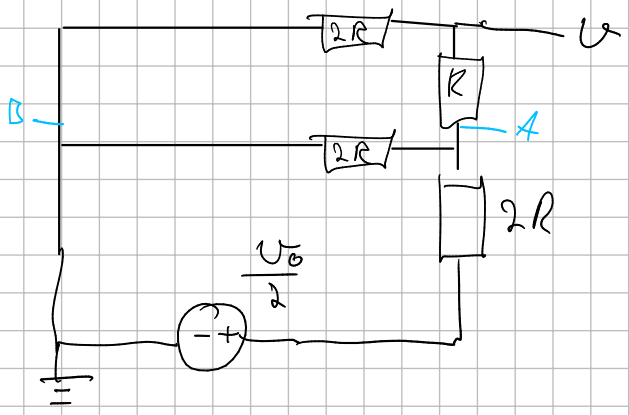
$J = \frac{V_0}{4R}$

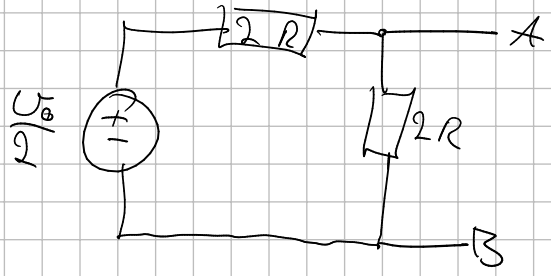
$A = V_0 \frac{Z}{X+Z}$



U_0'



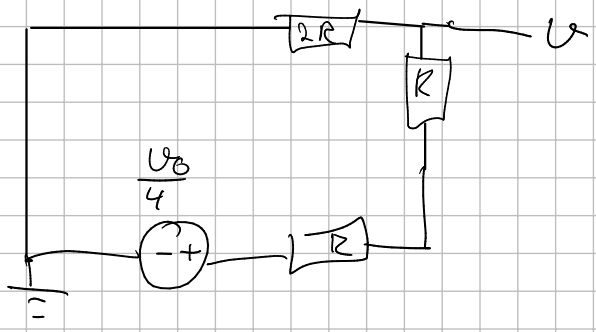


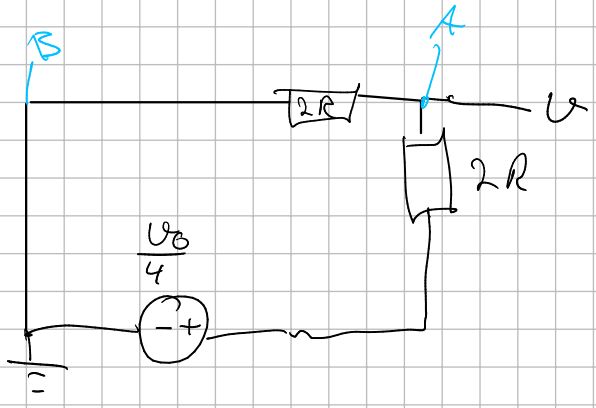


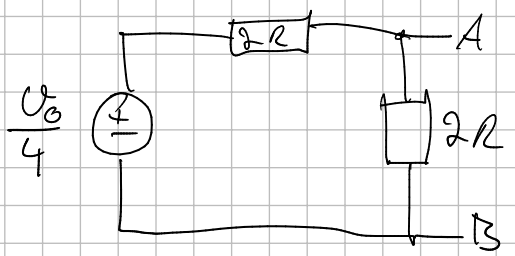
$\frac{U_0}{2} = 0$ $\quad R_{eq} = 1R$

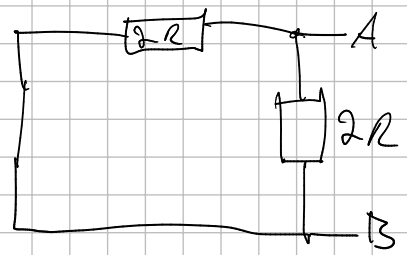
$U_{ab} = \frac{U_0}{2} \cdot \frac{2R}{4R}$

$U_{ab} = \frac{U_0}{4}$





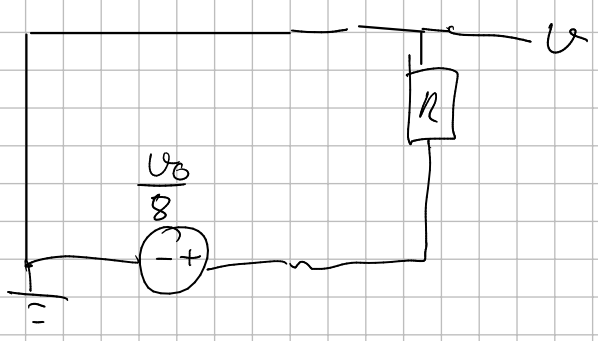




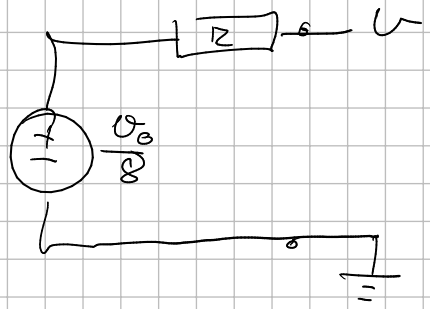
$R_{th} = 1R$

$V_{ab} = \frac{V_0}{4} \cdot \frac{2R}{4R}$

$= \frac{V_0}{8}$

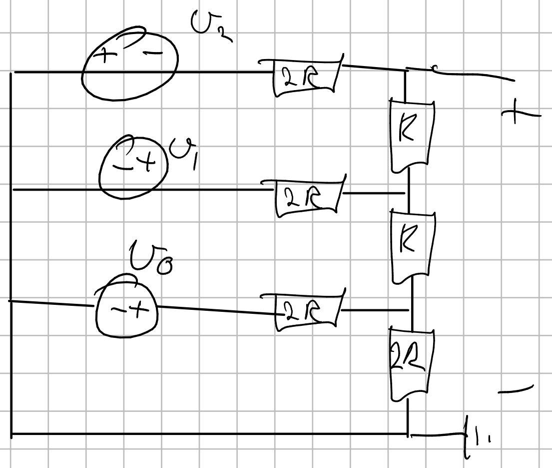


$\Rightarrow$

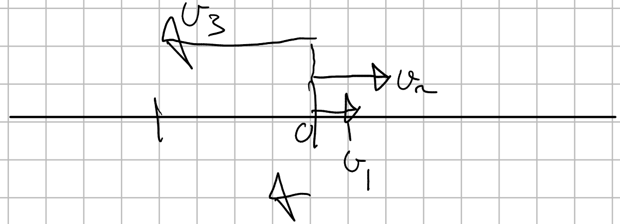


$v_o' = \frac{v_o}{8}$

(3)



msb – [illegible] +1



10   −10

msb
01010
10101
10110
−16 +4+2 = −10

111
$-2^3\ 2^1\ 2^0$

−1