

Using the MOSFET equation for $v_{DS} \ll v_{OV}$ fill in the following table.
For which letter (a-i) does this assumption ($v_{DS} \ll v_{OV}$) not hold.

Constants:

$$\epsilon_{ox} = 3.45 \times 10^{-11} \text{ [F/m]}$$

$$\mu_n = 1350 \text{ [cm}^2\text{/V}\cdot\text{s]}$$

	t_{ox} [nm]	C_{ox} [F/m ²]	W [μm]	L [μm]	k_n' [mA/V ²]	k_n [mA/V ²]	V_t [V]	v_{GS} [V]	v_{OV} [V]	v_{DS} [V]	r_{DS} [Ω]	i_D [mA]
a.	2.1		5.0	0.10			1.0		1.0	0.01		
b.		0.0080	6.6			13.0		5.0	4.5	0.20		
c.		0.0056		0.24		10.0	1.2		-0.2	0.05		
d.			30.0		0.58	17.5	0.3		2.4			9.2
e.				0.07	3.58		0.7	1.6		0.31		78.5
f.		0.0108	10.5	0.75				2.8	2.5	0.55		
g.		0.0059	7.5	0.20				0.2	-0.6	3.22		
h.	7.9		20.0			14.7	2.0		0.5			4.1
i.		0.0036		0.04		24.3		6.5			6.8	279.7