

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 [μ m]	L [μ m]	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.	1.9		6.0	0.12			1.2		1.0	0.015		
b.		0.0080	6.6			13.0		5.0	4.5	0.20		
c.		0.0056		0.24		10.0	1.0		-0.2	0.06		
d.			20.0		0.58	17.5	0.3		2.4			9.2
e.				0.07	3.58		0.7	1.8		0.31		75.5
f.		0.01	8.5	0.75				2.6	2.5	0.55		
g.		0.006	7.5	0.20				0.3	-0.6	3.22		
h.	7.9		25.0			13.7	2.1		0.5			4.5
i.		0.004		0.04		21.3		6.5			6.8	179.7

a	1.9000	0.0182	6.0000	0.1200	2.4513	122.5658	1.2000	2.2000	1.0000	0.0150	8.1589	1.8385	yes
b	4.3125	0.0080	6.6000	0.5483	1.0800	13.0000	0.5000	5.0000	4.5000	0.2000	17.0940	11.7000	yes
c	6.1607	0.0056	3.1746	0.2400	0.7560	10.0000	1.0000	0.8000	-0.2000	0.0600	-500.0000	-0.1200	no
d	8.0302	0.0043	20.0000	0.6629	0.5800	17.5000	0.3000	2.7000	2.4000	0.2190	23.8095	9.2000	yes
e	1.3010	0.0265	4.3292	0.0700	3.5800	221.4076	0.7000	1.8000	1.1000	0.3100	4.1060	75.5000	maybe
f	3.4500	0.0100	8.5000	0.7500	1.3500	15.3000	0.1000	2.6000	2.5000	0.5500	26.1438	21.0375	maybe
g	5.7500	0.0060	7.5000	0.2000	0.8100	30.3750	0.9000	0.3000	-0.6000	3.2200	-54.8697	-58.6845	no
h	7.9000	0.0044	25.0000	1.0758	0.5896	13.7000	2.1000	2.6000	0.5000	0.6569	145.9854	4.5000	no
i	8.6250	0.0040	1.5778	0.0400	0.5400	21.3000	-0.4042	6.5000	6.9042	1.2220	6.8000	179.7000	no