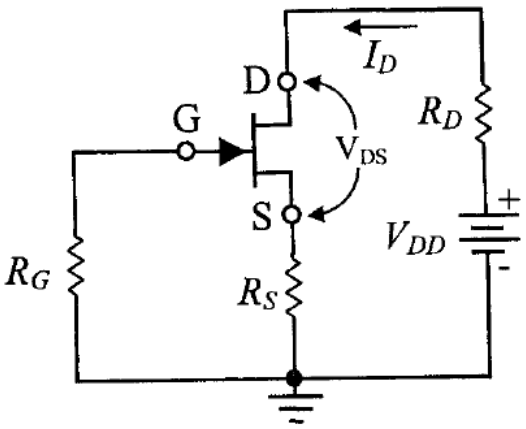
Field Effect Transistor (FETs) Homework Problems

JFET (Self-Biased) - Corrected 03-19-2017

V_{DD} =	+12 V
R_G =	470 KΩ
R_S =	750 Ω
R_D =	3300 Ω
I_{DSS} =	12 mA
$V_{GS(off)}$ =	-1.73 V
V_{GS} =	-1.12 V



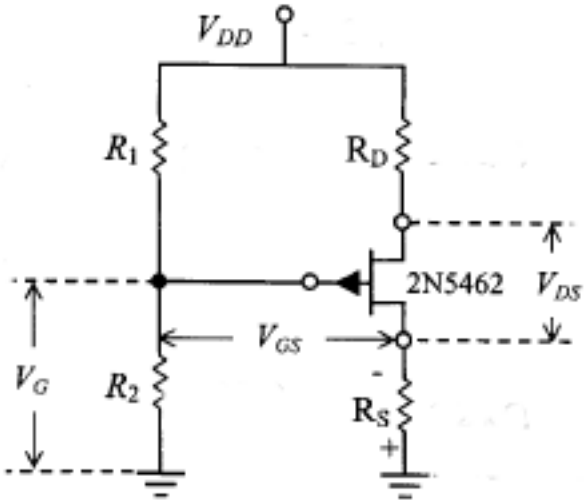
Calculate:

I_{DQ}

V_{DSQ}

JFET (Voltage Divider)

V_{DD} =	-15 V
R_1 =	750 KΩ
R_2 =	120KΩ
R_D =	1500 Ω
R_S =	1200 Ω
I_{DSS} =	-10 mA
$V_{GS(off)}$ =	3.33 V
V_{GS} =	1.57 V



Calculate:

I_{DQ}

V_{DSQ}

FET Biasing Homework Solutions - corrected 03-19-2017

1. N Channel Self-Biased

   $I_{DQ} = 1.5$ mA

   $V_{DSQ} = 6.0$ V

2. P Channel Voltage Divider Biased

   $I_{DQ} = -3$ mA

   $V_{DSQ} = -6.8$ V