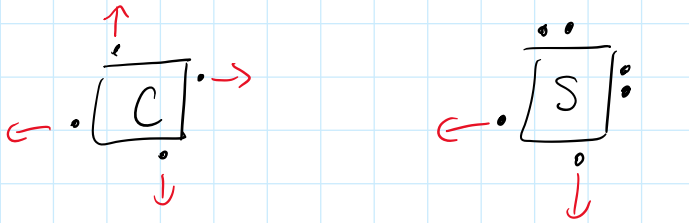
CS2

CS_2 $\quad T = 4 + 2(6) = 4 + 12 = 16.$

C S

central:



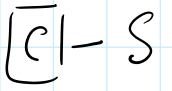
4 bonds

central ✓

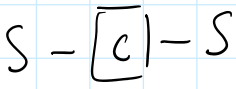
2 bonds

C is central

$T = 16$ ~~C~~, S, S

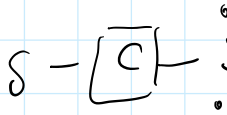


$T = 16 - 2 = 14$ C, S, S



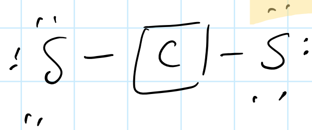
$T = 14 - 2 = 12$ ~~C~~, S, S

On right:
S could use 6 e⁻ to mk an oct



$T = 12 - 6 = 6$, no more atoms to use.

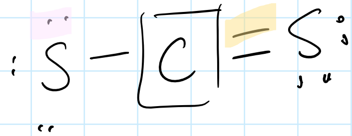
on the L:



$T = 6 - 6 = 0$,

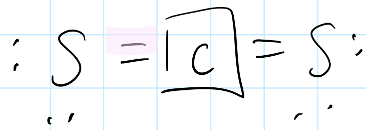
—||—

used up a LP to turn into one more bond 2 mk a double bond.



no more e^--s left

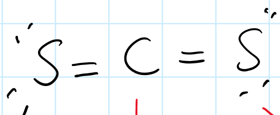
—||—



—||—

—||—

Check FC:



symmetric ∅

$FC(C) = 4 - 4 = ∅$

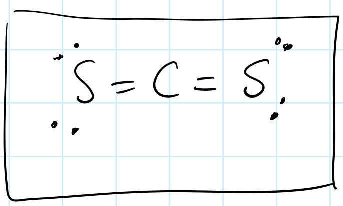
$FC(S) = 6 - 2 - 4 = ∅$ (2 = sticks, 4 = rocks)

Total $FC = ∅ + ∅ + ∅ = ∅$

which is great b/c the formula was indeed neutral.

All the atoms have ideal FC-s.

∴ The structure is correct:



To turn this into a proper dot diagram replace each bond with 2 dots: