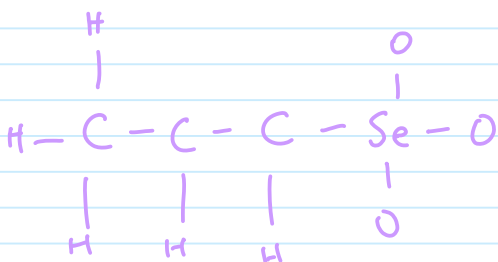


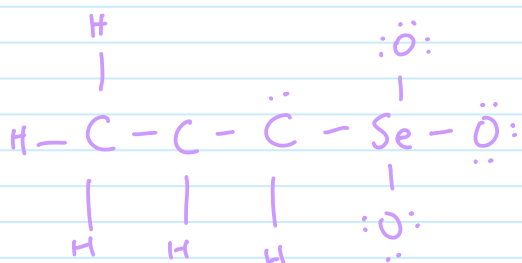


$T = 42$

$$T = 3(4) + 5 + 6 + 3(6) + 1 = 12 + 11 + 18 + 1 = 23 + 19 = 42$$

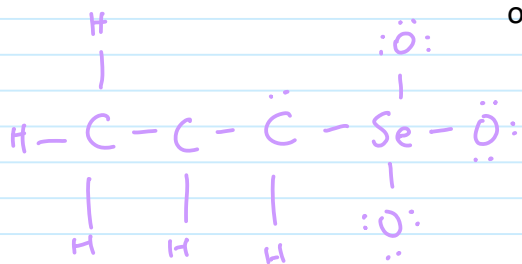


$$42 - 2(11) = 42 - 22 = 20$$



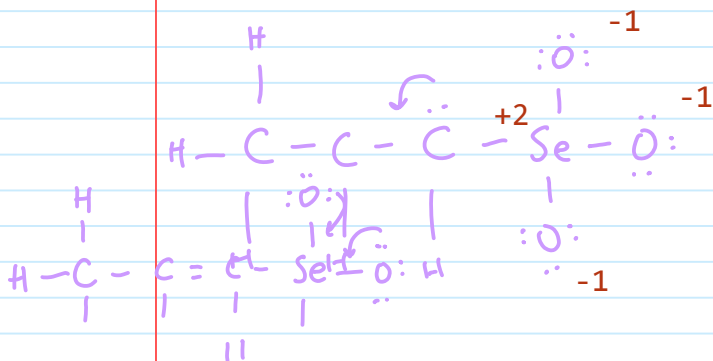
$$20 - 3(6) = 2$$

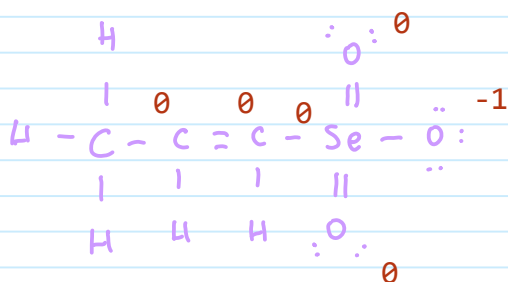
missing octet
on the 2nd Carbon



FC(Se) = 6 - 4 = 2, horrible FC
I'd like to be able to remove 2
more bonds for Se so that I get a
zero FC. Thus Se should have two
more bonds.

Let two of the oxygens each share
one more bond. This also fixes the
FC = -1 on those oxygens improving
the arrangement even further.





(reorient the molecule a bit)

$$FC(\text{Se}) = 6 - 6 = 0$$

Why can Se hold 6 bonds? Compare to Oxygen that can only have 2 bonds.

Se has a larger bond capacity than oxygen for ex. which is above it in the periodic table, b/c it is in the fourth shell, so it can have a max of 6 bonds based on its valence.

This is because it has unoccupied d-orbitals which allows each of the 6 valence electrons to reside alone in s, p, and the extra d-orbitals that can be half-occupied. These total to $1+3+5=9$ such orbitals, more than enough for the 6 valence e⁻ to become loners in their own orbital.

