HCO3-

HCO_3^-

$T = 1 + 4 + 3(6) + 1 = 5 + 18 + 1 = 6 + 18 = 24\bar{e}$

(1 → H, 4 → C, 3(6) → 0, 1 → ⊖ charge)

C can mk the most # of bonds => goes in the middle

C T = 24ē C, O, O, O, H

next atom in line w/ most ability to mk bonds is oxygen:

C T = 24ē C, O, O, O, H

C–O T = 24 − 2 = 22 C, Ø, O, O, H

repeat

C(–O)(–O) T = 22 − 2 = 20 C, Ø, Ø, O, H

O–C(–O)(–O) T = 20 − 2 = 18 C, Ø, Ø, Ø, H

The 1st H will prefer to bond to an oxygen

O–C(–O)(–O)–H T = 18 − 2 = 16ē C, Ø, Ø, Ø, H

no more atoms left

O_L & O_B can use 6ē each = 6 × 2 = 12ē for an 8-et.

:O–C(–O:)–O–H T = 16 − 12 = 4ē —//—

O_R could use the 4ē remaining to complete an 8-et

:O–C(–O:)–O–H T = 4 − 4 = Ø —//—

no more ē-s left

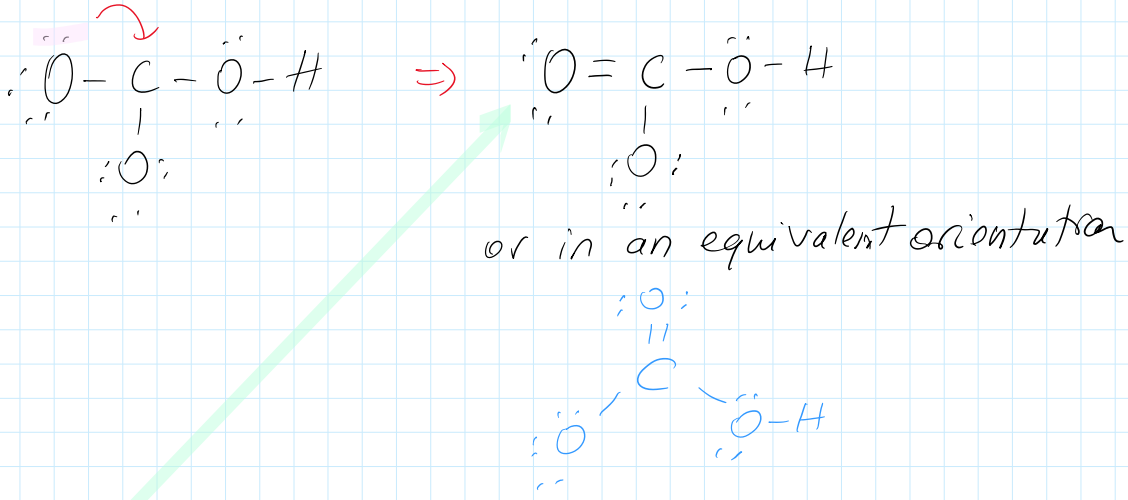
only 6ē are present!

no more $\bar{e}$-s left

only 6 e^- are present

C does not hv an 8-et, & all th oxygens around it hv lone-pairs  tha can be used to share a bond & thus increase the numb. f $\bar{e}$s in C by $2\bar{e}$.

Which oxygen should we use? opt for either O_L or O_B b/c both can form more new bonds than O_R



or in an equivalent orientation

$FC(O_L) = 6-2-4=0$ ✓

$FC(C) = 4-4=0$ ✓

$FC(O_B) = 6-1-6=-1$, ok but only b/c there is a charge

$FC(O_R) = 6-2-4=0$ ✓

All FC-s together = $\overset{O_L}{0} + \overset{C}{0} + \overset{O_R}{0} + \overset{O_B}{(-1)} = -1$ ← our molecule was charged by (1-) ✓