For the molecules below:

- o Using the correct combination of in plane, wedged and dashed lines <u>re-draw</u> the compounds below in three-dimensional form.
- o <u>Check the boxes</u> below the molecule to indicate whether the compound has a molecular dipole moment (μ =0 or μ ≠0).
- For those compounds that have dipole moments indicate the direction of the dipole

$$CH_3DCH_3$$

$$\square \mu = 0 \quad \square \mu \neq 0$$

$$\square \mu = 0 \quad \square \mu \neq 0$$

For the molecules below:

- o <u>Check the boxes</u> below the molecule to indicate whether the compound has a molecular dipole moment (μ =0 or μ ≠0).
- For those compounds that have dipole moments indicate the direction of the dipole

$$Br$$

$$Br$$

$$CI$$

$$\mu = 0 \quad \mu \neq 0$$

$$\mu = 0 \quad \mu \neq 0$$