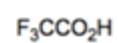
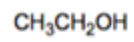
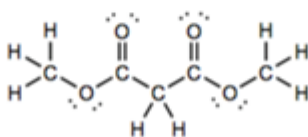
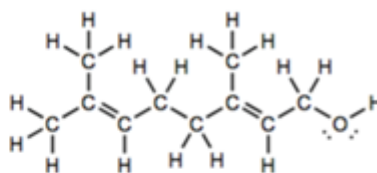
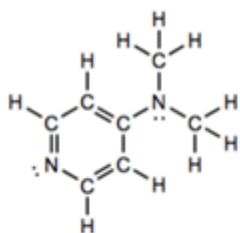


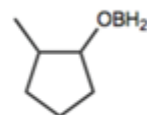
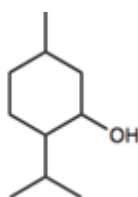
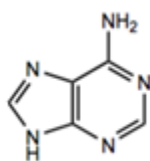
1. Disegnate le strutture di Lewis (con tutti gli atomi e lone pairs – doppietti elettronici spaiati) delle seguenti molecole



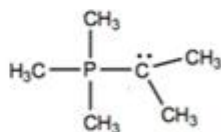
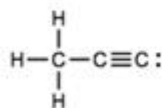
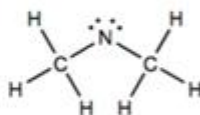
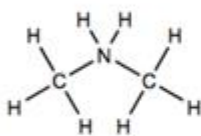
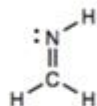
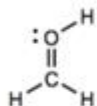
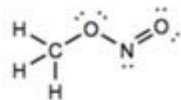
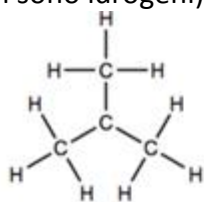
2. Disegnate le corrispondenti formule di struttura semplificate per le seguenti strutture di Lewis



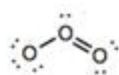
3. Per le seguenti formule di struttura semplificate, disegnate le corrispondenti strutture di Lewis



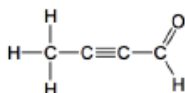
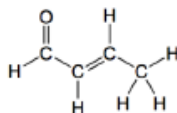
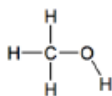
4. Per le seguenti strutture di Lewis, indicate le cariche formali su tutti gli atomi (che non sono idrogeni).



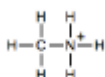
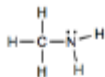
Il P e' nella stessa colonna del N nella tabella periodica, quindi potete tranquillamente assumere che i comportamenti sono analoghi.



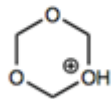
5. Completate le seguenti strutture di Lewis (disegnando i lone pair). Indicate poi l'ibridizzazione di ogni atomo (che non sia idrogeno)



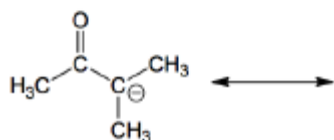
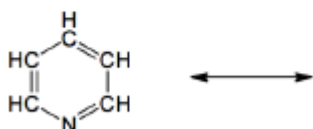
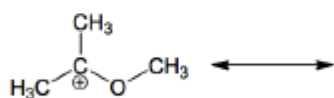
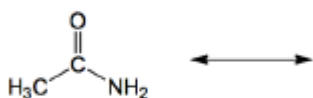
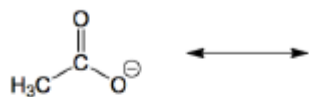
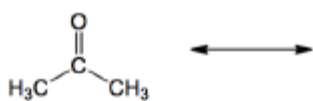
6. Ciascuna delle seguenti molecole contiene un legame C-N. Indicate l'ibridizzazione di ciascun C e N e descrivete come ogni orbitale viene usato (legame σ , legame π , lone pair, etc) e come questi orbitali formano il legame C-N.



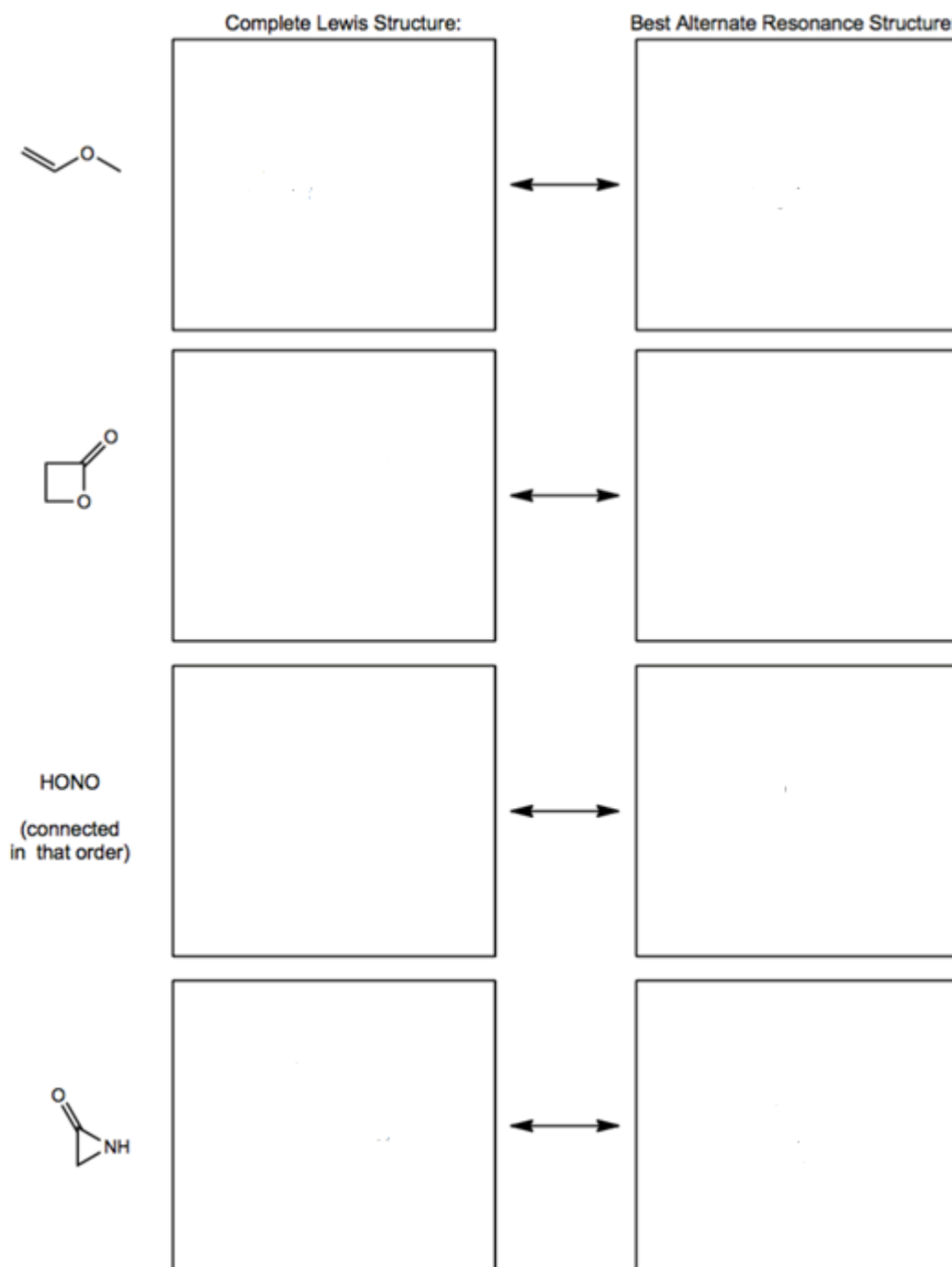
7. Per ciascuna delle seguenti formule di struttura semplificate disegnate la completa struttura di Lewis (indicando tutti gli atomi, lone pairs e cariche formali). (ogni struttura ha le cariche formali già indicate)



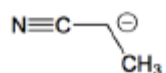
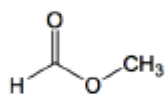
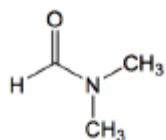
8. Completate le seguenti strutture di Lewis disegnando tutti i lone pair. Disegnate poi una struttura di risonanza alternativa. Infine indicate quale delle due strutture di risonanza e' piu' stabile



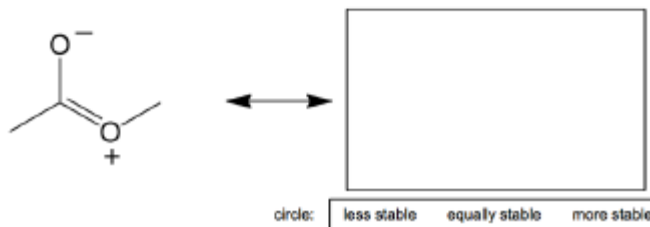
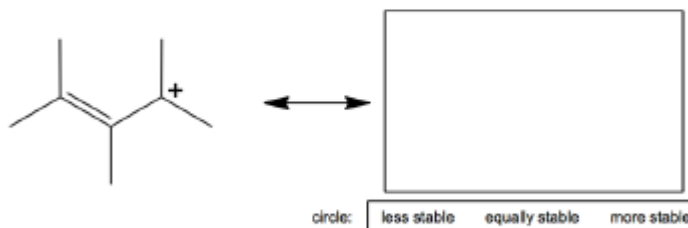
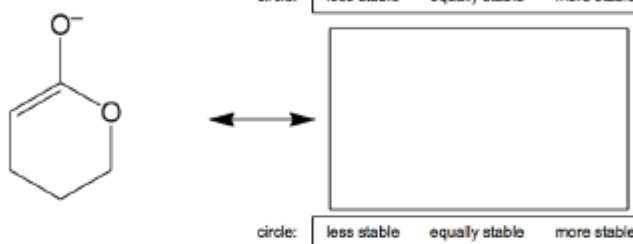
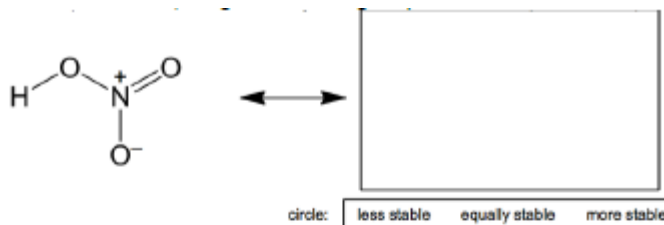
9. Per ciascuna specie completate la struttura di Lewis, mostrando tutti gli atomi, legami e lone pairs. Disegnate la struttura di risonanza migliore nel secondo riquadro



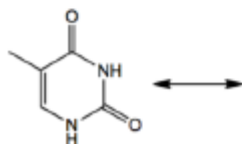
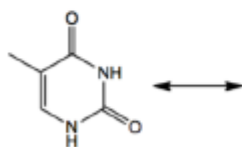
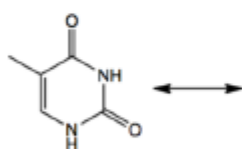
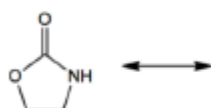
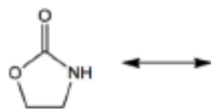
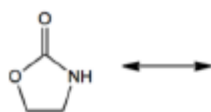
10. Ciascuna delle seguenti strutture ha un lone pair che deve andare in un orbitale 2p per ottenere la risonanza. Identificate ciascuno dei questi lone pair e mostrate le corrispondenti struttura di risonanza. Infine indicate l'ibridizzazione (corretta!) di ciascun atomo (che non sia H).



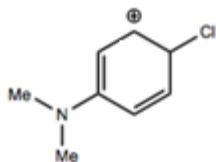
11. Ciascuna delle seguenti molecola ha una struttura di risonanza 'significativa'.
 Disegnate la **migliore** struttura di risonanza alternativa mostrando come ci siete arrivati utilizzando le frecce (curved-arrow formalism). Aggiungete dove necessario i lone pair. Alla fine indicate se la nuova struttura di risonanza e' meno, ugualmente o piu' stabile della struttura che vi abbiamo dato. (Nota: potrebbero esserci piu' di una struttura di risonanza, disegnate solo la migliore)



12. Ciascuna delle seguenti strutture presenta diverse strutture di risonanza alternative. Disegnate alcune di queste strutture utilizzando le frecce per tenere conto del movimento degli elettroni.



13. Ciascuna delle seguenti molecole ha altre 3 strutture di risonanza. Utilizzando le frecce, disegnate queste 3 strutture di risonanza. Nota: disegnate i lone pair dove necessario. Infine, cerchiate la struttura di risonanza migliore (maggior contributo) motivando brevemente la vostra scelta (una frase)



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