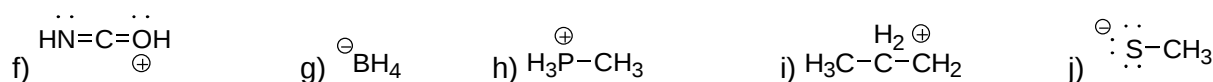
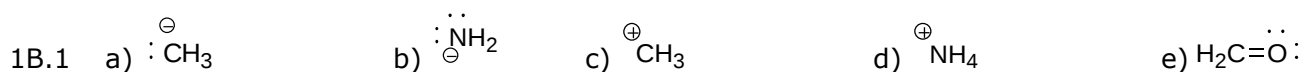
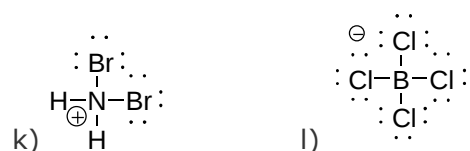
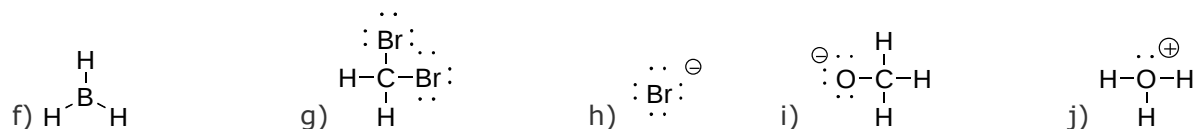
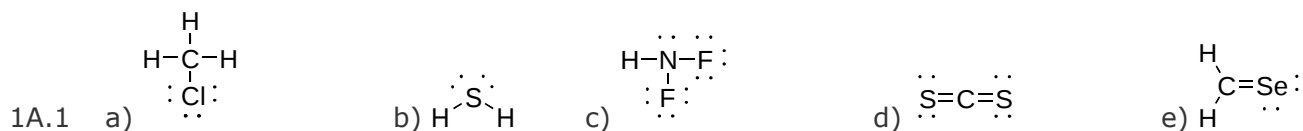
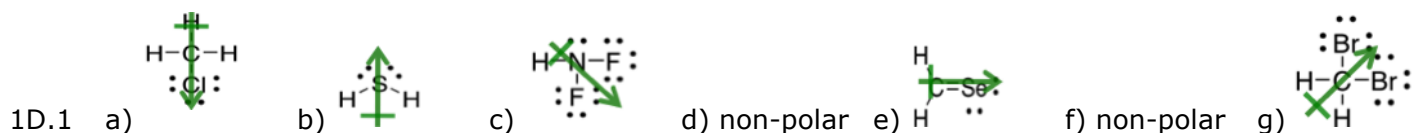


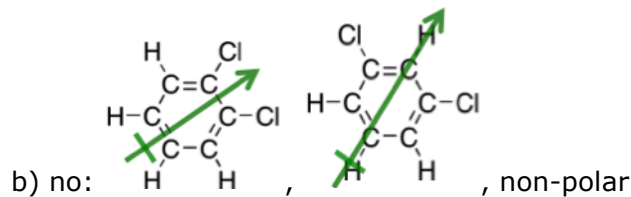
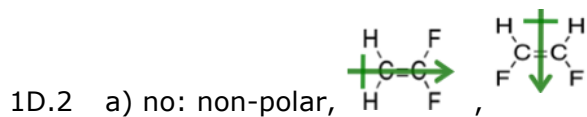
PRACTICE PROBLEMS UNIT 1 - KEY



- 1C.1 a) tetrahedral, 109° ; b) bent, 109° ; c) trigonal pyramid, 109° ; d) linear, 180° ;
e) trigonal planar, 120° ; f) trigonal planar, 120° ; g) tetrahedral, 109° ; h) n/a;
i) tetrahedral, 109° ; j) trigonal pyramid, 109° ; k) tetrahedral, 109° ; l) tetrahedral, 109°

- 1C.2 a) bent, 109° ; b) tetrahedral, 109° ; c) trigonal planar, 120° ; d) bent, 120° ;
e) linear, 180° ; f) tetrahedral, 109° ; g) linear, 180° ; h) trigonal planar, 120° ;
i) trigonal pyramid, 109° ; j) trigonal planar, 120° ; k) trigonal planar, 120° ;
l) trigonal pyramid, 109°

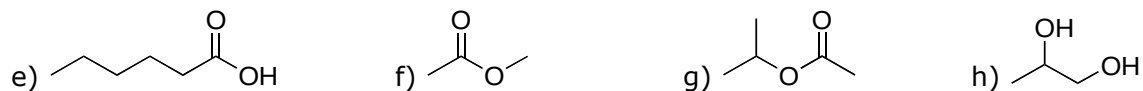
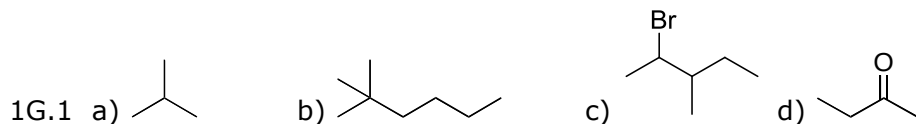




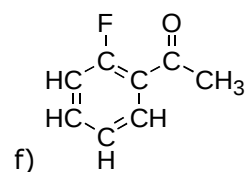
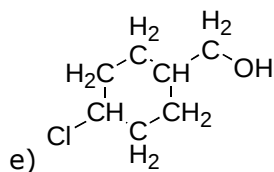
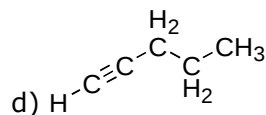
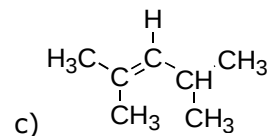
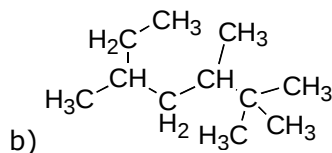
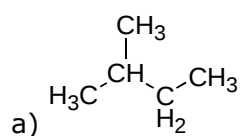
1E.1 a) sp^3 ; b) sp^3 ; c) sp^3 ; d) sp ; e) sp^2 ; f) sp^2 ; g) sp^3 ; h) n/a; i) sp^3 ; j) sp^3 ;
k) sp^3 ; l) sp^3

1E.2 a) sp^3 ; b) sp^3 ; c) sp^2 ; d) sp^2 ; e) sp ; f) sp^3 ; g) sp ; h) sp^2 ; i) sp^3 ; j) sp^2 ;
k) sp^2 ; l) sp^3

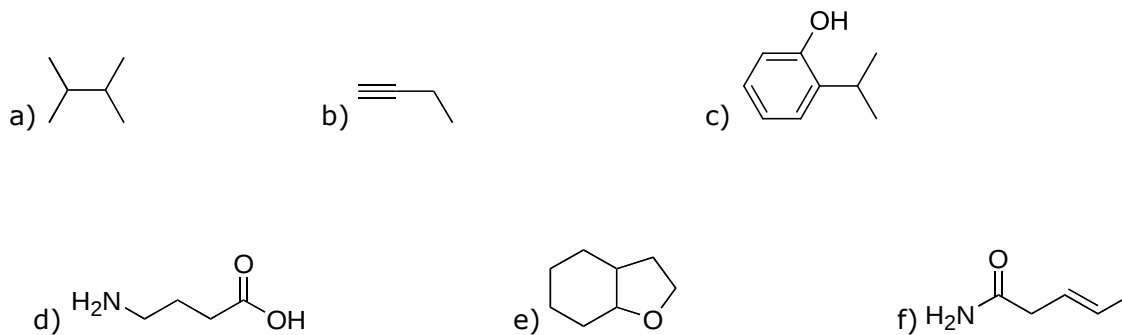
1F.1 a) $5\sigma, 1\pi$; b) $6\sigma, 2\pi$; c) $6\sigma, 2\pi$; d) $12\sigma, 3\pi$; e) $7\sigma, 1\pi$;



1H.1

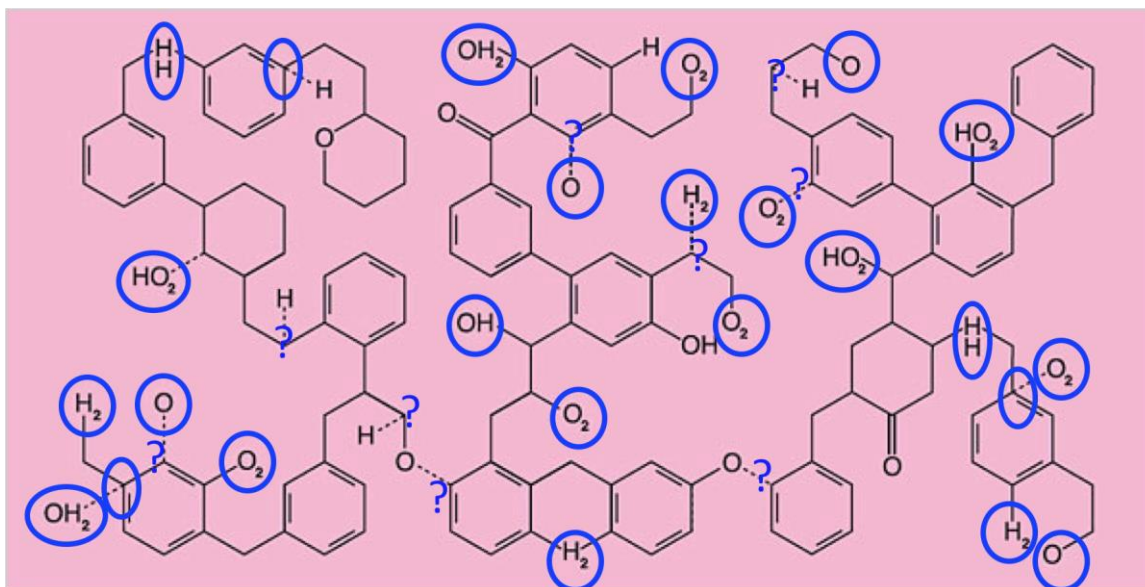


1H.2



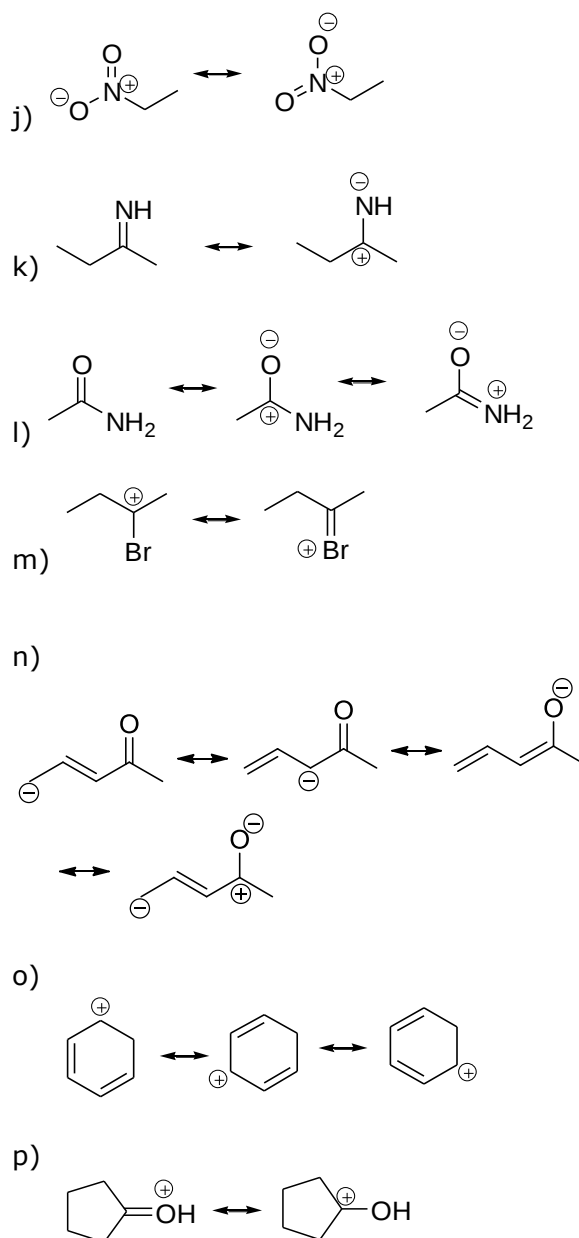
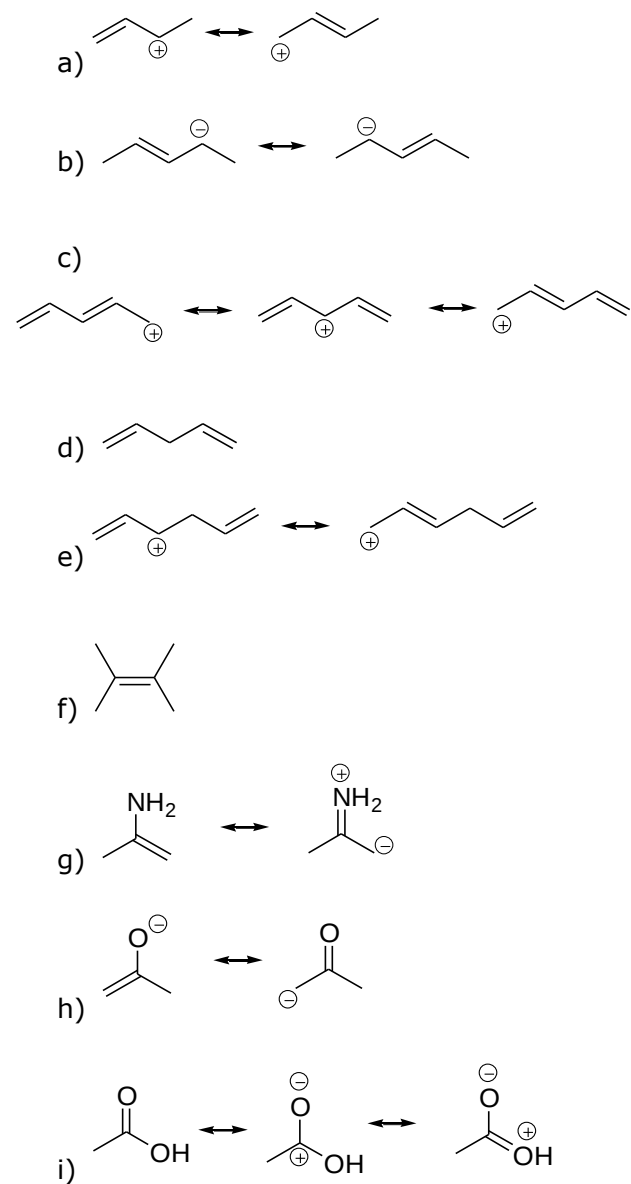
- 1H.3 a) C: 8, H: 18, LP: 0; b) C: 9, H: 8, LP: 0; c) C: 8, H: 17, LP: 0; d) C: 7, H: 13, LP: 1;
 e) C: 6, H: 8, LP: 14; f) C: 8, H: 10, LP: 8; g) C: 10, H: 12, LP: 4; h) C: 20, H: 30, LP: 2;
 i) C: 21, H: 30, LP: 10;

1H.4



- 1I.1 a), d), and f) are resonance structures. The others are structural isomers.

11.2



1X.1 a)

A	bent	109°	sp ³
B	tetrahedral	109°	sp ³
C	trigonal pyramid	109°	sp ³
D	trigonal planar	120°	sp ²
E	bent	120°	sp ²
F	trigonal pyramid	109°	sp ³
	C: 6, H:9, LP: 7		

b)

	linear	180°	sp
B	trigonal planar	120°	sp ²
C	trigonal pyramid	109°	sp ³
D	tetrahedral	109°	sp ³
E	trigonal planar	120°	sp ²
	C: 14, H:16, LP: 4		