1. For the following reactions, draw a mechanism and predict the product. Be sure to account for regiochemistry, stereochemistry, and any rearrangements in the mechanism. (20 pts)

\_\_\_\_\_/30

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

1. For the following reactions, predict the products (no mechanism). Make sure you include the proper regiochemistry and stereochemistry. (4 pts)

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |

1. Fill in the boxes below. All reagents are in the box. (6 pts)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| HBr | HBr, HOOH | H2O, dil. H2SO4 | H2, Pt | Br2, H2O | Br2 |
| 1. Hg(OAc)2, H2O
2. NaBH4
 | 1. BH3
2. H2O2, NaOH
 | 1. CH3CO3H
2. H+
 | 1. OsO4
2. NaHSO3/H2O
 | 1. O3
2. SMe2
 | 1. KMnO4,
2. NaOH
 |

