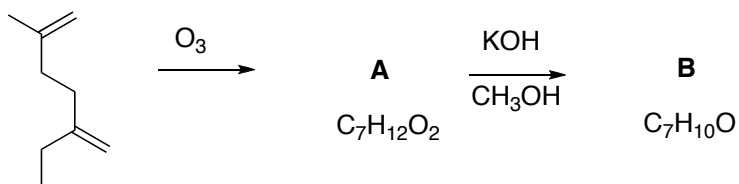
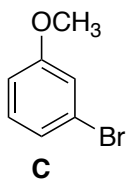


1. (10 points) Write the structures of **A** and **B**.



$^{13}C$  NMR:  
210.2, s  
160.4, s  
141.8, s  
34.2, t  
26.4, t  
14.2, q  
10.1, q

2. (10 points) Outline a synthesis of **C** starting from benzene.



3. (10 points) Draw an arrow-pushing mechanism for the conversion of **D** to **E**.

