

Last Name:

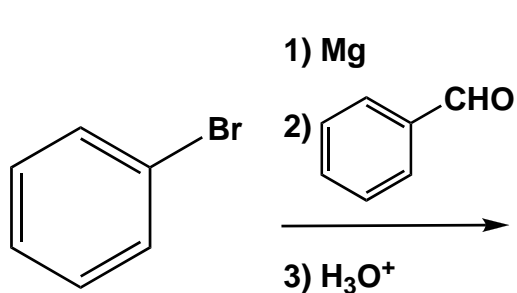
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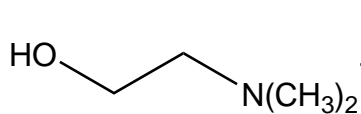
SCORE:

Deadline for CH 318 POW 7: Oct 19, 2009 3:00 PM

**Multi-step synthesis:** Provide products for the following sequence of reactions. Draw each product in the box provided. Note: Benadryl is formed by the reaction of the sodium salt of "A" with "B".



A  
C<sub>13</sub>H<sub>12</sub>O



SOCl<sub>2</sub>



B  
C<sub>4</sub>H<sub>10</sub>NCl

1) NaH

2) "B"



C  
C<sub>17</sub>H<sub>21</sub>NO  
Diphenhydramine  
Benadryl®

Reactions: Draw the structure for the products of the following reaction(s).

