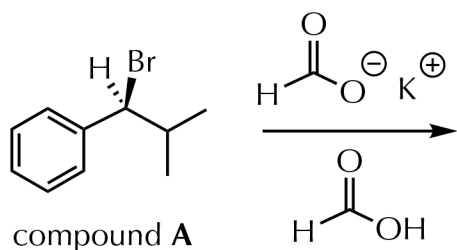


7.45 For the following transformations, the starting materials are chiral and only the (*S*)-isomer was used (as shown). Draw in the expected product(s) and answer the questions about changing the reaction conditions.

(a)



(b) Assuming that the same reaction mechanism occurs (with identical or analogous product(s) forming); then:

(i) If **A** was changed to the reaction rate would:

increase	decrease	remain the same
<i>brief explanation:</i>		

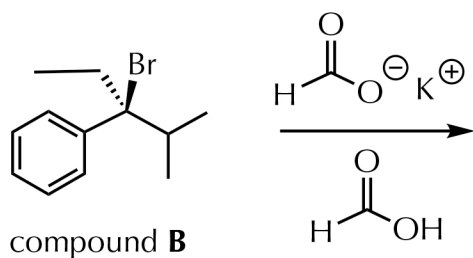
(ii) If **A** was changed to the reaction rate would:

increase	decrease	remain the same
<i>brief explanation:</i>		

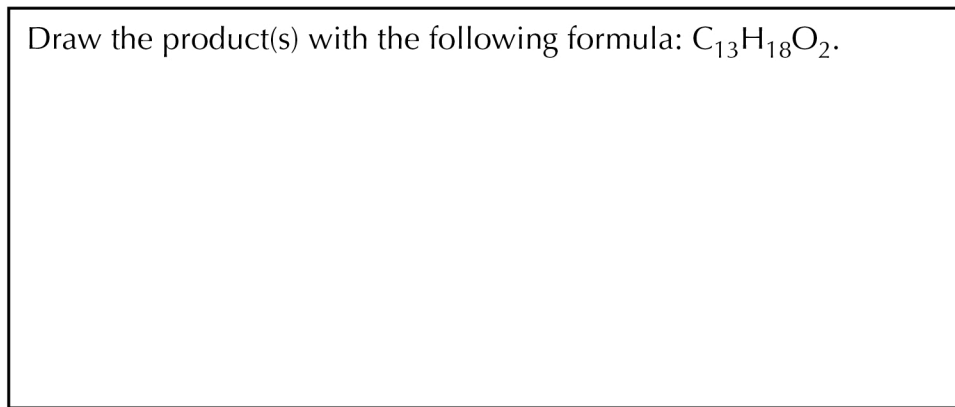
(iii) If the concentration of **A** doubled, the reaction rate would:

increase	decrease	remain the same
<i>brief explanation:</i>		

(c)



Draw the product(s) with the following formula: C<sub>13</sub>H<sub>18</sub>O<sub>2</sub>.



(d) Assuming that the same reaction mechanism occurs (with identical or analogous product(s) forming); then:

(i) If **B** was changed to the reaction rate would:

increase	decrease	remain the same
<i>brief explanation:</i>		

(ii) If the concentration doubled, the reaction rate would:

increase	decrease	remain the same
<i>brief explanation:</i>		

(iii) If the solvent was changed to CCl<sub>4</sub>, the reaction rate would:

increase	decrease	remain the same
<i>brief explanation:</i>		