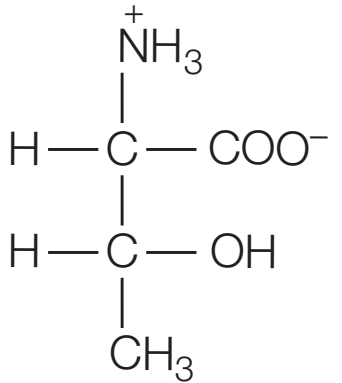
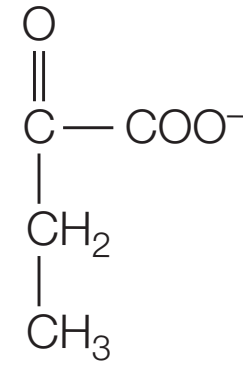


1 The first reaction is the commitment step.

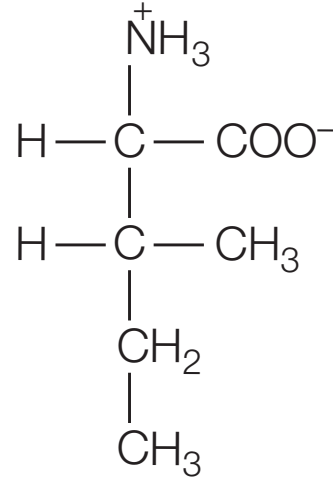
2 Each of these reactions is catalyzed by a different enzyme, and each forms a different intermediate product.



Threonine
(starting material)



α-Ketobutyrate
(intermediate product)



Isoleucine
(end product)

3 Buildup of the end product allosterically inhibits the enzyme that catalyzes the commitment step, thus shutting down its own production.