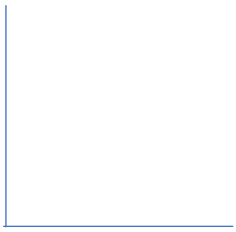
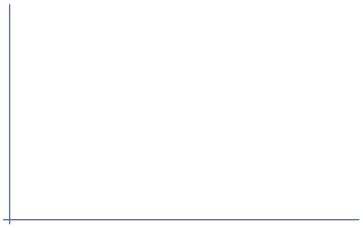
Metabolism HL

1. Metabolic pathways can be _____ or _____. They are controlled by enzymes, which _____ the _____ energy of chemical reactions. This can be shown as follows:



2. Enzymes can be inhibited for various reasons. One example is to control the enzymes from producing too much of a product. In this case, it is called _____-_____ inhibition. An example is the pathway that converts _____, an essential _____, into _____, which is non-essential. This is a schematic of the reaction pathway:

_____ binds to the _____ site on the _____, blocking the pathway when enough _____ has been produced. Because it does not bind to the _____ site, this type of inhibition is called _____ inhibition. This graph shows the rate of reaction with this type of inhibitor:



3. Inhibitors can also be _____. This is when the inhibitor has a similar _____ to the _____, so can therefore bind to the _____. An example is _____, which competes with _____ for the _____ site on _____ dehydrogenase This graph shows the rate of reaction with this type of inhibitor: