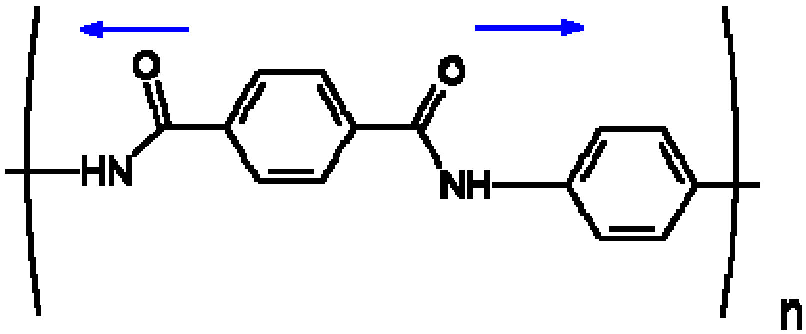
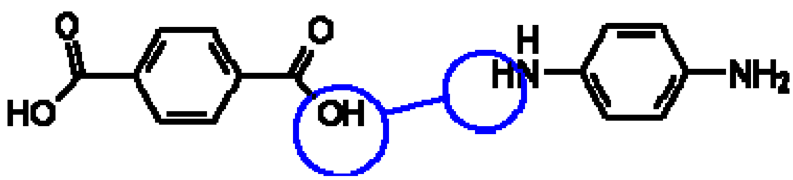
We can see that the backbond of Kevlar contains functional groups - amide groups, to be specific. Therefore it is a condensation polymer, and the groups that must condense to form it are carboxyl (CO_2H) and amino (NH_2) groups.

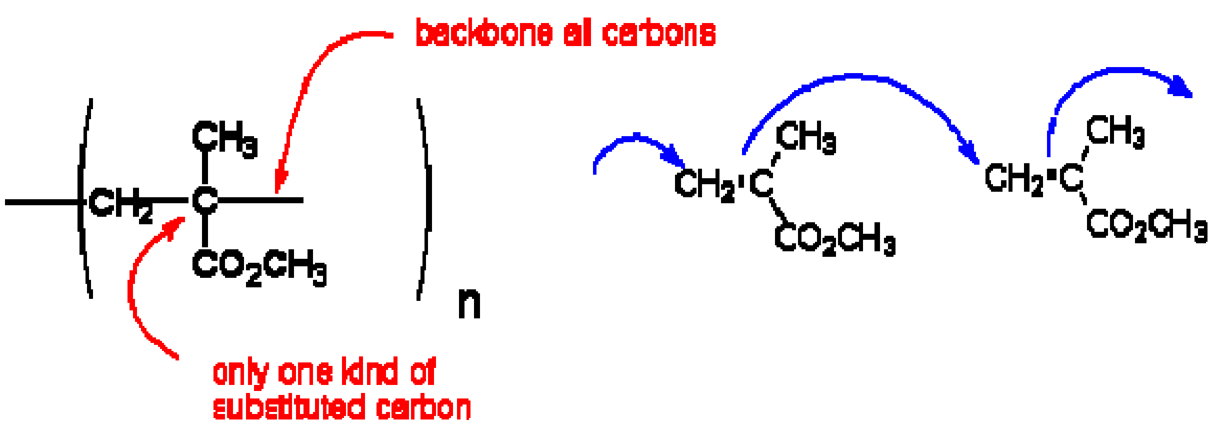




As the blue arrows on the Kevlar structure indicate, the functional groups "face" in different directions. That is, the N is to the right of the C=O in one amide group and to its left in the other. This observation tells us that two different monomers were used, one containing both carboxyl functions and one containing both amino functions.

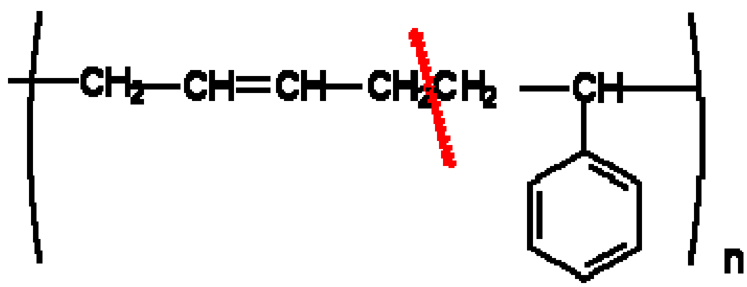
All that remains is to write the two carboxyls and place between them the carbon spacer that appears in the polymer structure: a benzene ring. The diamine monomer is written similarly. The circles indicate how water is eliminated during polymer formation.

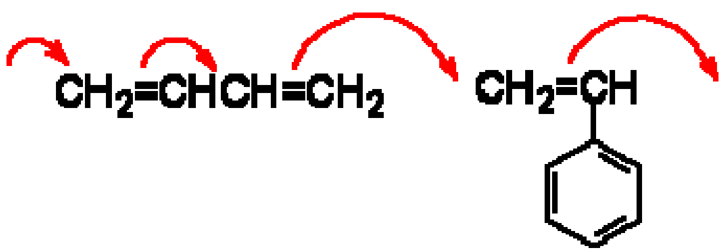
The backbone of the methyl methacrylate polymer is all carbon atoms:



Hence, this is an addition polymer. Only one kind of substituted carbon is found in the backbone, so a single monomer was used. Monomers for addition polymers all contain at least one double or triple bond, which is used to zip up the polymer. Thus the monomer is the structure shown at right, with the arrows indicating how the units can combine using the electrons of the double bond.

SBR is a much harder case. We can tell that it must be an addition polymer because the backbone is all carbons. The double bond in the backbone, as in natural rubber, implies that a monomer contained *two* double bonds. Proceeding from here requires more experience than we have at this point. Given a further hint by translating the acronym - SBR stands for styrene-butadiene rubber, we can come up with the monomers shown:





and see how they can be zipped up. SBR is an addition *co*polymer, made from two different monomers, unlike the other addition polymers we have seen.