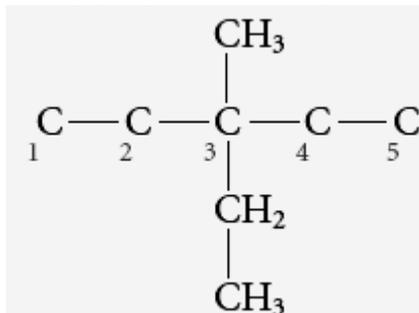


Step 1 Identify the root and the suffix of the name: This step gives you the number of carbons in the main chain and the type of functional group present. For 3-ethyl-3-methylpentane, the root and suffix are –pentane. The root, pent, tells you there are five carbons in the main chain. The suffix, –ane, tells you that the chain has only single carbon–carbon bonds.

Step 2 Draw the main chain first: Draw a straight chain containing five carbon atoms with single bonds between the atoms. Do not include hydrogen atoms yet.



Step 3 Choose one end of your carbon chain to be carbon number 1 and number the rest of the chain in sequence. Add the indicated branches to the appropriate carbon: In this case, add a methyl group and an ethyl group both at carbon three. You may place the branches on either side of the main chain.



Step 4 Complete your formula by adding the number of hydrogen atoms beside each carbon that will give each carbon four bonds: Add hydrogen atoms as shown below.

