

we claim; but as your sophistication increases and you become adept at carrying out such explicit constructions yourself, you can leave out many of the details. The main thing is that before you skip any such details, you should be absolutely sure that you could quickly write them down and check your claims rigorously; this is the only way to be sure that you are not hiding real difficulties behind “hand-waving.” In this book we will begin to leave out some such details in our proofs; for a while, you should fill them in for yourself to be sure that you know how to turn an argument based on pictures into a complete proof.

Now we describe a general method for building surfaces by identifying