For example, to measure any distance along a road we fix upon a known distance, such as a mile, and express all distances by saying how many times they contain this unit. Thus 16 is the measure of a distance containing 16 miles.

Again, to measure a man's income we take one pound as our unit, and thus if we said (as we often do say) that a man's income is 500 a year, we should mean 500 times the unit, that is, £500. Unless we knew what the unit was, to say that a man's income was 500 would convey no definite meaning : all we should know would be that, whatever our unit was, a pound, a dollar, or a franc, the man's income would be 500 times that unit, that is, £500, 500 dollars, or 500 francs.

N.B. Since the unit contains itself *once*, its measure is *unity*, and hence its name.

34. Now we can conceive a quantity to be such that when put to another quantity of the same kind it will entirely or in part neutralize its effect.

Thus, if I walk 4 miles towards a certain object and then return along the same road 2 miles, I may say that the latter distance is such a quantity that it neutralizes part of my first journey, so far as regards my position with respect to the point from which I started.

Again, if I gain £500 in trade and then lose £400, I may say that the latter sum is such a quantity that it neutralizes part of my first gain.

If I gain £500 and then lose £700, I may say that the latter sum is such a quantity that it neutralizes all my first gain, and not only that, but also a quantity of which the absolute value is £200 remains *in readiness to neutralize some future gain*. Regarding this £200 by itself we call it *a quantity* which will have a *subtractive* effect on subsequent profits.

Now, since Algebra is intended to deal with such questions in a general way, and to teach us how to put quantities, alike or opposite in their effect, together, a convention is adopted, founded on the *additive* or *subtractive* effect of the quantities in question, and stated thus :

"To the quantities to be *added* prefix the sign $+$, and to the quantities to be *subtracted* prefix the sign $-$, and then write down all the quantities involved in such a question connected with these signs."