of the diphasic curve is usually sufficient to determine net positivity or negativity (Fig. 22).

The measurement of the mean electrical axis of the QRS, particularly in the frontal plane, is a useful clinical tool. It can be calculated relatively easily and frequently aids in the differentiation of a normal from an abnormal electrocardiogram. Similarly, the mean electrical axis of the repolarization wave, the T wave, can also be plotted. The determination of the angular relationship of the mean electrical axis of QRS to T gives additional, useful clinical information.

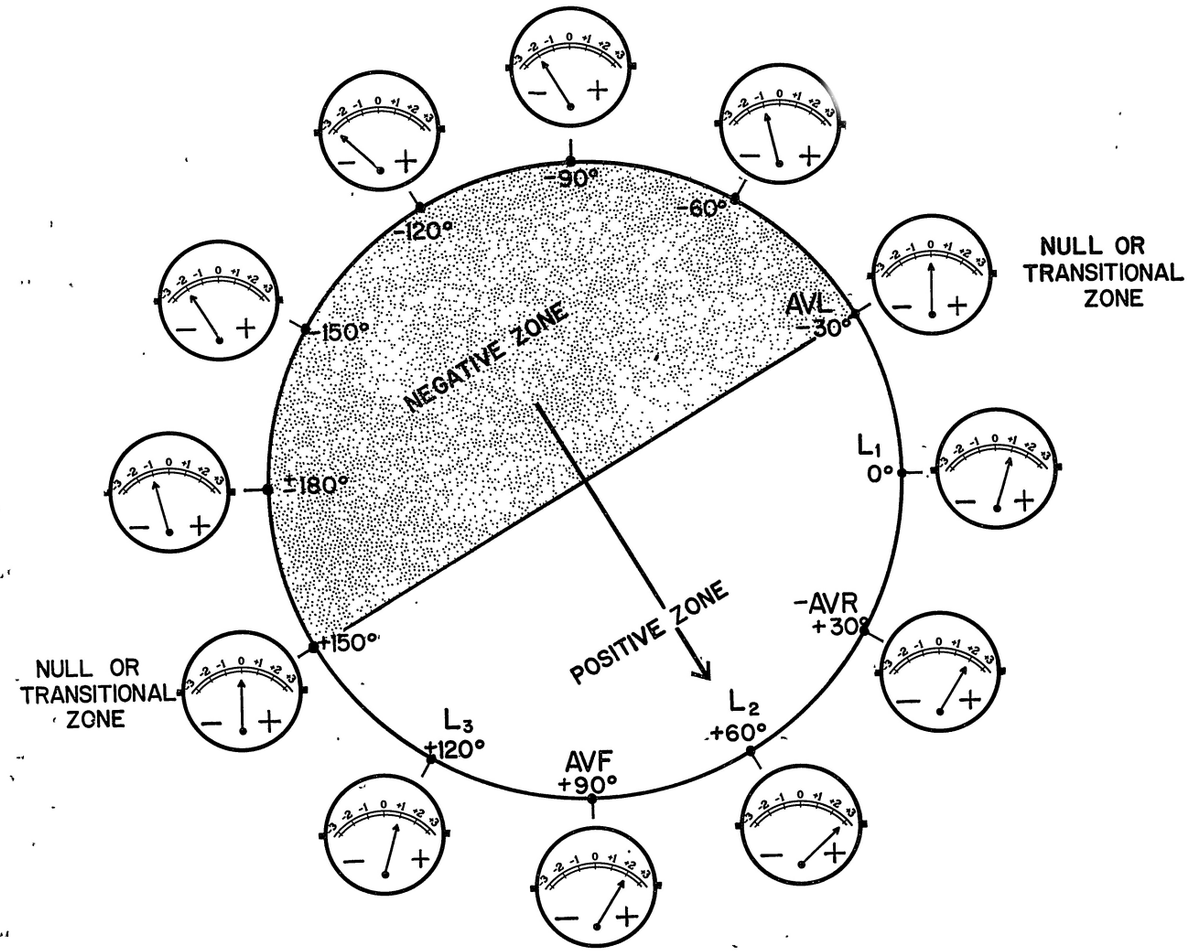

FIGURE 21. The mean vector of depolarization is directed toward lead 2 (plus 60 degrees). The maximum voltage is recorded at this lead position. The maximum negative voltage is recorded 180 degrees away, at minus 120 degrees. At right angles to the axis of the vector there is a null or transitional zone where the sum of the recorded voltages is zero. In this illustration it is located at minus 30 degrees, aV_L, and at plus 150 degrees. All voltages recorded in front of the null zone are resultantly positive. All behind it are negative.

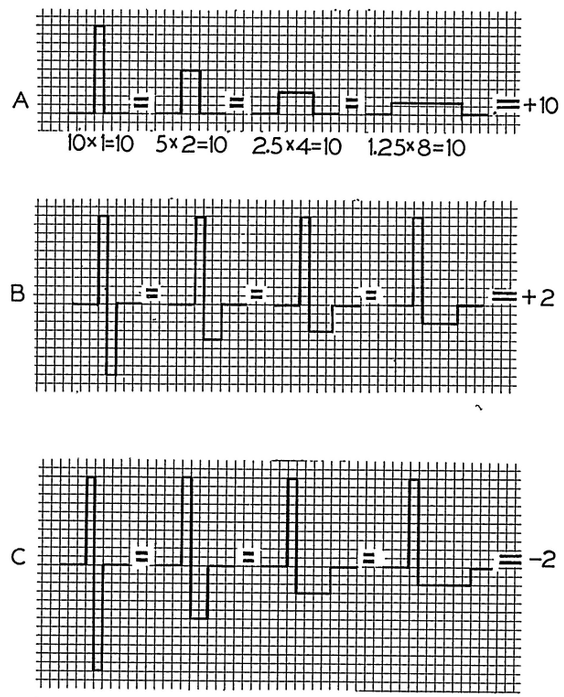

FIGURE 22. Calculating the area under a curve. A, Four diagrammatic representations of QRS complexes with marked variations of form but with identical resultant positivity. All enclose ten boxes. B, Four diagrammatic QRS complexes, in all of which the R waves are constant in form and amplitude and enclose ten boxes. The S waves vary in form and amplitude but all enclose the same total area—eight boxes. The QRS, therefore, is resultantly positive by two boxes. C, Similar to "B" except that the area under the S is now twelve boxes and the QRS complex is, therefore, resultantly negative.