the work, because their own powers have been evoked, study the twentieth proposition. See if the text-book brings up the truths that we have discovered. See if it states these truths more exactly and more concisely than we have done, and arranges them more satisfactorily. To-morrow, in proving this proposition, follow the best mode of statement and of arrangement.

The proposition so learned should be succeeded by many corollaries and deductions based upon it and upon those that precede it, of which the demonstrations should be furnished by pupils, as in the examples which follow.

Prove the twentieth proposition by letting fall a perpendicular from the vertex upon the base.

Prove it by bisecting the vertical angle.

The length of a broken line joining two points is greater than that of the straight line joining them.

Let two points be joined by a path which is as short as any which can join them, then every point in that path is in the straight line joining the two points. Hence a straight line is the shortest distance between two points.

The difference of two sides of a triangle is less than the third side.

The sum of two sides of a triangle is greater than twice the line drawn from the vertex to the middle of the base.

The sum of the distances of any point within a triangle from its angles is greater than half the perimeter of the triangle.

The perimeter of a triangle is greater than twice the line joining one angle of the triangle with a point in the opposite side.

If lines be drawn from the angles of a triangle through a point within it to meet the opposite sides, the perimeter of the triangle is greater than two-thirds of the sum of the three lines.

The distances of the intersection of the diagonals of a quadrilateral from its angles are together less than those of any other point.

The sides of any quadrilateral are greater than its diagonals, but less than twice its diagonals.

If two convex rectilineal figures stand on the same base, one being enclosed by the other, the interior figure has the less perimeter. Hence part of the twenty-first proposition.

—*Amicus.*