ing obsolete denominate quantities — all exercises requiring for their solution processes essentially algebraic, and all subjects which require for their clear and easy comprehension some actual practice in business transactions.

The problems should be all of the most directly practical character, arising naturally from the pupils' environment. That is, they should be of such a kind as are most likely to meet the pupil in after life, and should be presented to him in the form in which they will probably occur.

Abstruse problems afford a certain amount of mental discipline which, however, is not so useful or healthful a mental exercise as the rapid, accurate and objective solution of concrete and practical problems arising out of every day life.

A certain kind of muscular power may be acquired in heavy gymnastics, but it is a faculty which is neither so useful nor so pleasurable as that acquired by the delightful and all-round developing games of the play-ground.

We might institute a similar comparison between the tread-mill methods of ordinary teaching in the ancient languages and the delightful language training that might be obtained from a well-conducted course in English literature and English composition.

But to return to our subject we heartily endorse the idea that algebraic problems be deferred until they can be treated algebraically, and that the more difficult exercises in commercial arithmetic be left for business colleges. That the teaching should be by concrete problems, that correctness and facility should be emphasized, and that the interest of the pupil should be secured and held by the evident practical utility of the work in which he is required to measure, weigh, estimate and inductively frame his own rules.

The second recommendation of this conference is very important, and on the exact lines laid down in the Nova Scotia course of study nearly two years ago.

From the time the pupil enters the kindergarten he is to be made familiar with geometrical conceptions by drawing, measuring and modelling. After the age of ten he should devote one hour each week to the construction, with and without instruments, of various figures, plans, maps, etc., carefully drawn. By experimental methods he can learn the leading truths of plane and solid geometry, and thus be prepared to enter on the more exact methods of proof with clear fundamental conceptions, which will make his subsequent progress easy, pleasant and rapid.

The regular study of algebra should begin at about the age of fourteen. Five hours a week for one year, and half that time for the next two years will enable the ordinary pupil, if well taught, to master all that is necessary before entering college. The difficulties of algebra will be greatly lessened if in the arithmetic course the pupil is familiarized with the use of literal expressions as representing numerical values. Much attention should be given to radicals and to fractional and negative exponents.

In formal or demonstrative geometry the conference recommends: (*a*) A very clear understanding of the geometric axioms and postulates. (*b*) The direct comparison of magnitudes, rather than the numerical or algebraic methods of arriving at their relations. (*c*) Rigorously accurate and elegant proofs. (*d*) A study of the relations of geometrical proofs to the forms of logic. (*e*) The invention of constructions and proofs by the pupil leading him to construct his own geometry. (*f*) Some attention to projective geometry.

Assuming all these recommendations to be sound, as they undoubtedly are, to what changes in our course of study should they lead ?

1. We are greatly in need of new arithmetics. Those now in use run counter to nearly every principle laid down.

2. In the study of arithmetic during the last two years of the course, the simpler forms of algebraic equations should be made familiar to the pupils.

3. During the same time a simple text-book on constructive geometry should be in the hands of the pupils.

4. The text-book on formal geometry should begin with a short chapter, intended to illustrate the use and nature of the axioms.

The numerical method should appear only in the appendix. There should also be a chapter on modern geometry. With these improvements Hamblin Smith's geometry would equal the best.

LENGTH OF SCHOOL SESSIONS.

A school board in Montreal proposes a new departure in the matter of school hours. The proposition is to have one session, from nine until one, during *six* days in the week. Excess of school work is to be followed by excess of recreation during *six* days in the week. Most teachers would object to the Saturday teaching at least. In some of the cities in the Maritime Provinces it has been the practice to have what is called one session (9-1) on stormy days. It was a novelty at the start, but teachers came to dread it, especially those having younger pupils. Pupils can not fix their attention to do satisfactory mental work when their stomachs crave food. They become restless and inattentive. Even the teachers become nervous and