

1. Upon the same base, and on the same side of it, there cannot be two triangles that have their sides which are terminated in one extremity of the base, equal to one another, and likewise those which are terminated in the other extremity.

2. If a straight line be divided into two equal parts, and also into two unequal parts, the rectangle contained by the unequal parts, together with the square on the line between the points of section, is equal to the square on half the line.

3. If from the right angle of a right-angled triangle lines be drawn to the opposite angles of the square described on the hypotenuse, the difference of the squares on these lines is equal to the difference of the squares on the two sides of the triangle.

[Use II. 12.]

#### ALGEBRA.

1. Reduce to lowest terms  $\frac{9x^3 + 6x^2 - 2x - 4}{12x^3 - 6x^2 - 4x - 4}$ .

2. An express train leaves London for Manchester (188 miles) at 9 a.m., travelling 40 miles per hour; a slow train leaves Manchester for London at 11 a.m., travelling 20 miles an hour. When will they meet?

3. Solve the equations:—

$$(1) \begin{cases} 7x - 16y = 32 \\ 5x + 17y = 30 \end{cases}$$

$$(2) \frac{1}{1-x^2} - \frac{7}{8} = \frac{1}{1-x} - \frac{1}{1+x}$$

#### MENSURATION.

1. Find the length of a circular arc whose radius is 20 ft. 9 in., and which contains an angle of  $15^\circ$ .

2. The sides of a triangle are 13 ft., 15 ft., 18 ft. Find the two parts into which the greatest side is divided by the perpendicular from the opposite angle.

### Notes and News.

#### ONTARIO.

The High School Boards of Chatham and Lindsay are applying to the Education Department to be recognised as High Schools.

Owen Sound High School has an average attendance of 205.

The second lecture in the Ontario Ladies' College was delivered on Friday evening, March 25th, by Prof. Macoun, of Albert University; subject, "The North-West."

Brigden S. S., Lambton, is in need of a new school building.

The St. Thomas Collegiate Institute has an average attendance of 206 for February.

**CHANGE OF BASE.**—Mr. Andrew Hay, formerly principal of the Stratford public school, but latterly of Kingston, has been appointed mathematical master of the High School at Ingersoll. As the change is presumably for the better, we congratulate Mr. Hay on having made it—*Stratford Beacon*.

The Bowmanville Statesman of March 11th contains the following: "The Minister of Education has promised to make Lindsay High School a Collegiate Institute."

Dr. Nelles lectured at the Ontario Ladies' College at Whitby on March 11th; subject, "Mistakes in Teaching."

At a meeting of the St. Thomas Board of Education on Monday evening, it was decided to proceed immediately with the erection of two Ward school-houses, and the Building Committee was instructed to purchase the necessary ground for the purpose. The Third Ward building will be located upon the south side of Spring street, while the Fifth Ward structure will adorn the east side of Ross street, between Myrtle and Forest avenue.—*London Free Press*.

Mr. Whitney, H. M. of Iroquois High School, in a lecture on Walter Scott, before the Dundas Teachers' Association lately, expressed the opinion that the English "Literature" of the High School programme was the most useful as well as the most entertaining subject therein.

We learn from the *Queen's College Journal* that undergraduates, as well as graduates, will in future be allowed to vote at the election of a Chancellor of that Institution.

The *Guelpy Mercury*, March 3rd, contains a leader criticising the New School Bill. Exception is taken to the additions made to the compulsory part of the School Bill, while that already in the statute book is practically a dead letter, and to the withdrawal from the teacher of all choice in the matter of text-books.

We are glad to notice from the remarks made by Mr. Crooks in the House on Thursday, that all books in the Depository at Toronto that would be useful to the library of the Agricultural College would be sorted out and sent there.—*Guelpy Mercury*.

The *Journal de l'Instruction Publique*, of Montreal, contains a well-chosen collection of news and editorial comment with regard to educational matters among our Catholic friends of the lower provinces. Of especial interest is an account in the February number of the Congress of Catholic Teachers at Montreal.

The proprietors of this JOURNAL have received with pleasure a letter from W. Mackintosh, Public School Inspector, of Madoc, which concludes thus: "The March JOURNAL is a capital number. The CANADA SCHOOL JOURNAL is making constant advancement."

#### NOVA SCOTIA.

The following is the text of a bill, relating to higher education, introduced into the Legislature by the Hon. Provincial Secretary on the 16th inst:

#### A BILL ENTITLED "AN ACT IN RELATION TO COLLEGIATE INSTITUTIONS."

Be it enacted, &c.

1. Chapters 27 and 28 of the Acts of this Legislature passed in the year 1876 are hereby repealed, but this repeal shall not affect the validity or continuance of any degrees which have been conferred by the Halifax University under the provisions of said cap. 28.

2. The unmentioned sums shall hereafter be annually paid in aid of the Colleges hereinafter enumerated in lieu of all other grants and allowances, that is to say, to Dalhousie College, \$1,400; to Saint Mary's College, Halifax, \$1,400; to King's College, Windsor, \$1,400; to Acadia College, Wolfville, \$1,400; to Mount Allison Wesleyan College, Sackville, \$1,400; Saint Francis Xavier College, Antigonish, \$1,400.

3. The Superintendent of Education shall at least once in every quarter visit each of the said Colleges, and examine into the mode in which higher education is therein imparted, and make such enquiries as will enable him fully to report, and he shall quarterly report to the Council of Public Instruction upon the efficiency of each of the said Colleges, giving details of the equipment and progress of each, and giving such other information and details as may be required of him by any regulations of the Council of Public Instruction made from time to time.

4. The Council of Public Instruction may order to be withheld the grant to any of the Colleges hereinbefore mentioned in which the right of visitation as provided in the last preceding section may be denied, or in which the information referred to in said section is denied or erroneously given, and may withhold or suspend the grant from any College which they may pronounce inefficient, and the grant shall thereupon be withheld until the further order of the Council of Public Instruction.

Our next month's notes will contain a reference to the discussion and fate of this bill. It is thought that Section 3 will be modified in Committee as to the number of inspectoral visitations of the Superintendent of Education. The introduction of the bill in advance of parliamentary discussion has induced a lively newspaper controversy. The principle on which the grants are apportioned, and the repeal of the Halifax University Act are vigorously challenged by the *Morning Chronicle* and warmly defended by the *Morning Herald*.

The report of the Superintendent of Education was presented a few days after the opening of the Legislature. The number of pupils at school during the year ended 31st October, 1880, was 93,700—a diminution of 5,394 in comparison with the previous year's attendance. In reference to this decrease the Superintendent observes:

"A careful examination of the returns proves the fact, to which I have alluded in another connection, that the decrease in attendance is chiefly due to the closing of a certain number of schools, presumably from special and temporary causes. It will be remembered that the winter season of 1879-80 was felt in many parts of the Province to be one of peculiar hardship and depression. Now, notwithstanding the general good sense of the people, and the operative character of the legal provisions for sustaining schools, we should not be surprised to find that in the casting about for measures of economic relief, education has been sometimes selected as a fitting subject of retrenchment.

"In some counties, notably in Cumberland and Hants, where the reduction in the number of schools has been relatively large, the terrible ravages of diphtheria discouraged many Trustees from attempting to maintain what, under the circumstances, could have been little more than the shadows of schools. I may also observe that the determined efforts of the Council of Public Instruction to improve the character of the schools, to do justice to those who hold its own license to teach, and to elevate the profession of teaching generally, by limiting to cases of absolute educational necessity the issue of local permissive licenses, has operated to a slight extent with the foregoing causes. It will be inferred that I regard the figures under consideration as indicating but a temporary and special arrest of growth.