

to D, making $CD=OB$. On BD describe a semi-circle cutting circumference of larger circle in E. Join EB and produce it, letting it cut smaller circle in F and larger in G. Then will EG be the required chord. From A let fall a perpendicular AH on chord EG. Then triangles CEB and BHA are equal, therefore $EB=BH$. But $HB=HF$, and $HE=HG$ (III. 3), therefore BF=half of EG.

5. Let ABC be the equilateral triangle and P the given point. Let PD, PE and PF be the perpendiculars to BC, AC and AB respectively, and AM the perpendicular from point A. Through P draw GH parallel to BC and cutting AM in N. Then AGH is an equilateral triangle. NM is equal to PD. From G draw GL perpendicular to AC. Produce EP to K, and from G let fall GK perpendicular to EK. Then triangles FGP and GKP are equal, therefore $PF=PK$. Therefore PF and $PE=KE=GL=AN$. Therefore sum of PD, PE and $PF=AM$.

6. A prin. Tell her.

1a¹ That wastes her time, adj. clause qual. *her*.

2a¹ That now she knows, noun clause direct obj. of *tell*.

1a² When I resemble her to thee, adv. cl. *time*, modifies *knows*.

2a² How sweet and fair she seems to be, noun cl. obj. of *knows*.

(b) It is sweet to visit the silent wood.

"To visit the silent wood" is appositional enlargement of subject "it." See prescribed text-book of English grammar, *subject* page 79 b.

"Teacher." See answer to Paul Ford, No. 1.

R. B. O'B.—Please solve example 23, page 181, and examples 16 and 17, page 188, Todhunter's algebra.

1. Let x denote the number of men in one side of solid square.

Then $4x$ equals the number of men in one side of hollow square.

If the hollow square were solid, the number of men in it would be $(4x)^2$; therefore the whole number in the hollow square is $(4x)^2 - (4x-8)^2$.

Thus $(4x)^2 - (4x-8)^2 = 7x^2$.

2. Put the equation in the form $\frac{x-a}{a} = \frac{b-y}{b}$,
 $\frac{x^2 - a^2}{a} = \frac{b^2 - y^2}{b}$ The latter is $\frac{(x-a)(x+a)}{b} = \frac{b^2 - y^2}{b}$

Therefore either $b-y=0$, or $\frac{x+a}{b} = \frac{b+y}{b}$ Taking the former, we have $y=b$, and then from the first equation $x=a$. Taking the latter, we have $y=x+a-b$; substitute in the first equation, etc.

3. From first equation $y=2b-\frac{bx}{a}$ Substitute in second equation, etc.

SCHOOL AND COLLEGE.

The following students of the University Extension Classes in St. John, N. B., have successfully passed examination: In electricity, Prof. Duff lecturer—Miss Fannie Henderson, Miss G. A. MacIntyre and Miss Grace Murphy, and Messrs. F. R. Taylor and F. J. Mahon. In chemistry, Mr. A. E. McIntyre lecturer—Mr. C. H. Doig. In Canadian history, Mr. James Hannay lecturer—Miss Mabel Fairweather. In hygiene, Dr. Walker and Mr. A. E. McIntyre lecturers—Mrs. Alfred Morrissey, Miss G. A. McIntyre and Mr. W. Dacre Walker. In English literature, subject "Tennyson," Prof. Stockley lecturer—Misses Eleanor Robinson, M. B. Carr, M. L. Fairweather, Mary E. Hayes, Fannie E. Henderson, Lillie Herrington and Annie L. Matthews.

The new school house in process of construction at Wolfville is to be heated and ventilated by the Fuller & Warren Co. system of heating and ventilation which is in extensive use in the United States. The Robb Engineering Co. of Amherst are introducing the system into Canada.—*Kentville Advertiser*.

Principal Fraser, of the Halifax School for the Blind has conceived the admirable plan of sending teachers to the homes of those blind persons throughout the provinces who cannot avail themselves of the advantages of the school. This is a humane movement, and deserves that support that philanthropic people are already giving it.

Mr. Robt. Wilson, teacher at Lewisville, Westmorland Co., has, by means of a public school entertainment, purchased a copy of Webster's International Dictionary. The pupils find it the greatest aid of any in the school. A ball frame was procured by the same means. The entertainment was on the evening of the 19th ult. There was a very interesting programme carried out with complete success.

A correspondent for Maitland, N. S. sends us the following items:—The school has four departments and about 160 pupils. In the competition for work to send to the Chicago Fair, they carried off first honors for their district in the Fourth Grade. There are pupils doing the first and second year's work of the High School course. The school is so popular that it has no trouble in getting from the section special appliances for High School work.

The Provincial Normal School at Truro has a class of sixteen candidates for Class A. They represent all the provincial colleges. During the summer vacation some alterations will be made in the building to accommodate the manual training department.

There are over 400 applications for admission to the departmental examinations to be held at the various stations throughout New Brunswick, July 4th, next. A good supply of teachers for the future should be assured.

Profs. Dixon, Strong and Duff will spend the summer vacation in Europe.

The Nova Scotia Normal School is giving as an optional for some of its science work a ten days' course in butter making at the Provincial School of Agriculture. A very practical subject for oral lessons in country schools.