

But $2\cos 2x \cos x = \cos 3x + \cos x$; and the coeff. of x^{2n-2} on the right-hand side is $\frac{3^{2n-2}}{2n-2} + \frac{1^{2n-2}}{2n-2}$.

$$\therefore \frac{2}{2n-2} \left[\frac{2^{2n-2}}{2} + \frac{(2n-2)(2n-3)}{2} \cdot 2^{2n-4} + \&c. \right] = \frac{3^{2n-2}}{2n-2} + \frac{1^{2n-2}}{2n-2}$$

$$\therefore 2^{2n-1} + \frac{(2n-2)(2n-3)}{2} \cdot 2^{2n-4} + \&c. = 3^{2n-2} + 1.$$

5. Let ABC be the triangle BE, CF the lines of action of the forces. Produce ED and FC to meet in D . Then DB, DC represent also the magnitudes of the forces. It may be shown that $DB = DC$, and thence that the line of action of the resultant passes through A .

Correspondence.

To the Editor of the CANADA SCHOOL JOURNAL.

MR. EDITOR,—As I was going to Goderich to attend the association, in company with another teacher, he asked me if I had seen in the JOURNAL where a writer had accused me of plagiarism. I told him I had not, and on arriving at Goderich and enquiring into the matter, I found it was in the July-August number, and as I had been absent from home during the holidays and that paper did not come to my permanent home I had not seen it.

My first thoughts upon reading the article were to treat it with silent contempt, as anonymous epistles are very apt to lead to trouble; however, upon mature thought and advice from older teachers that silence might be construed into acknowledgment of guilt, I concluded to simply say the production is my own except what I culled from Mason's and other grammars I possess, and if any more is necessary, and "Enquirer" will write over his own name, I shall give a full account of the whole matter.

Thanking you, Mr. Editor, I remain,

W. M. LEIGH.

Farquhar, November 6, 1883.

M. J. S., MARKSVILLE, asks for an explanation of the aurora borealis or northern lights. The cause is not yet known. It is strongly suspected to owe its origin to electricity. Magnetic storms are frequently simultaneous with brilliant electrical displays. Pass electricity through a long glass tube exhausted by an air pump, and an appearance very much like the aurora is produced.

GEORGINA ELLIOTT, MACANETAWAN, writes: "Encouraged by your beautiful JOURNAL to give some items in my experience, I will try to give you my light on teaching Long Division." She sends us six steps for which we may find room in our Practical Department, by and by.

JOHN B. POWLES, FENELON FALLS, writes: "I have just received the third number of the JOURNAL, and am much pleased with it. It is a valuable addition to a teacher's stock of 'school information.'" This is just what multitudes of teachers are constantly saying. During the coming year we hope to make it more practically useful than ever. Friends, send on your dollar and get the January number. We cannot supply many back numbers. Our edition of 6,000 fell short in October, and we had to re-set the whole JOURNAL in order to print 1,000 more copies required on short notice.

To the Editor of the CANADA SCHOOL JOURNAL.

DEAR SIR,—I am in sympathy with your belief, that teachers may practically benefit each other by such a system of correspondence as you recommend, particularly in the September number of the SCHOOL JOURNAL. Younger teachers especially are anxious to hear from those more experienced their methods of dealing with difficulties which arise every day; and who can estimate the value

of even one such hint to some pains-taking teacher, who has exhausted his resources and adopts the method of another to find it a success? I shall proceed to prove my faith by my works, and offer to others my method of dealing with inattention.

I observe closely the following rules:—

I. Place those disposed to inattention in the front seats or the most conspicuous place in the class.

II. Make the lesson as attractive as possible.

III. Question promiscuously and occasionally call for simultaneous answers.

IV. If raising the hand be agreed upon as a sign of ability to answer, frequently question those whose hands are not raised, to ascertain whether the cause is inability or inattention.

V. If while explaining some particular point you observe a pupil not paying attention, stop and question. If he is unable to answer make a second explanation, and then show him that he wastes the time of both teacher and class by requiring a second explanation.

I have seen teachers loudly demand attention, bang the desks and stamp on the floor, at the expense of lungs, ruler, and shoe-leather, and yet nothing was effected but confusion. Be calm and decisive, control your temper and you will succeed. By enforcing the above rules I have always been able to secure good attention, except in very rare cases.

I should be very glad to obtain from some teacher answers to these questions, concerning whispering:

Is it best, as a rule, to allow pupils to work together?

Should there be a rule forbidding the pupils to speak to any one but the teacher?

If communication of any kind is allowed how can you prevent its going too far and creating disturbance?

Hoping to receive many useful hints from my fellow-teachers on different subjects,

I am, yours truly,

LENNOX TEACHER.

Napanee, October 16, 1883.

Special Articles.

THE KINDERGARTEN.

"For, eschewing books and tasks,
Nature answers all he asks."

WURTTIER: Barefoot boy.

I write this week from St. Louis, where I learn the Kindergartens are in successful and flourishing condition, being, as is well known, a part of the public school system.

Some time ago, on returning from Europe, Miss Blow found the kindergartens in a very backward state. Her pride in a system she had established here was touched. She determined to re-animate its drooping vitality. Among other means resorted to for this purpose, was an attempt to infuse her own spirit into some of the representative young ladies of the city. An impromptu and informal class, or organization, was formed. Miss Blow met them every week and delivered kindergarten lectures, etc. The result was renewed interest in, and prosperity for, the public kindergartens. Moreover, the seed thus dropped bore other fruit. Some of the young ladies made application of the ideas they received in their Sunday school classes and elsewhere. The interest thus aroused did not die out: and recently a class of society young ladies volunteered themselves to Miss Blow as disciples of Froebel. I had the pleasure of meeting this class Friday afternoon. They were learning a game called, "The Bridge." Miss Blow spent twenty minutes giving them an insight into its philosophy, and