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## Editorial $\mathbb{R}$ Rotes.

The number of pupils receiving instruction in temperance and hygiene in the Public Schools of Ontario has increased from 33,926, in 1882, to 191,406 in 1894 .

In 1894 the number of kindergartens in Ontario was 90 , with 184 teachers. They were attended by 9,340 pupils under six years of age.

In 1894 , the total school population of Ontario was 593,840 . Out of this the total number registered at school was 480,979 , while the average attendance was only 268,334 .

Attention is directed to the dates on which the various examinations begin, viz.: Specialists' (non-professional), May Ist ; School of Pedagogy, May 26th; Normal School, June 9th; High School Entrance and Public School Leaving, July 2nd; High School, Form I., July 7 th ; High School, Form II., and Commercial Specialists', July 9th; High School, Forms III. and IV., July rith.

The highest salary paid to a Public School teacher in 186; was $\$ 1,350$; in r894, $\$ \mathrm{I}, 500$. The average for the Province in the former year was $\$ 346$; in the latter year, $\$ 42$ i. But the average for the year preceding the last named, 1893, was slightly larger, viz., $\$ 423$, while in 1887 it had been $\$ 425$. There is reason to fear that the statistics for 1895, and especially

## TORONTO, APRIL i, 1896.

those for 1896, may show a much more serious decline.

Under the amended School Act, the moral responsibilities cast upon the teacher are more strictly defined. The teacher is required "to inculcate, by precept and example, respect for religion and the principles of Christian morality, and the highest regard for truth, justice, love of country, humanity, benevolence, sobriety, industry, frugality, purity, temperance, and all other virtues." He or she is also-a most salutary provision-given power to suspend any pupil guilty of " persistent truancy, violent opposition to authority, habitual and wilful neglect of duty, the use of profane or improper language, or conduct injurious to the moral tone of the school, and to notify the parent or guardian of the pupil and the trustees of such suspension."
"Two teachers," says the New York School fournal, "may have each a half hundrediboys and girls of all ages. Each has the same amount of knowledge as far as an examination can disclose it, but one does a work a thousandfold nobler than the other. One addresses the spiritual side of the pupils, the other leaves it untouched. It may be that this is done unconsciously; it may be that he is as needy for the money stipend as the other; but the fact remains that he has touched springs of motive wholly left alone by the other." This is admirably said. It would be a grand thing for the future of the schools and of the country if every teach. er could be led to test the value of his or her own work by the springs of motive that are daily being touched, the impressions that are being made and left upon the spiritual side of each of the pupils.

We have much satisfaction in calling attention to the new franchise offered to subscribers in this number. Not only, as Principal McIntosh says, should Parkman's works be in every school library in should be read by every teacher in the Province and in the Dominion; they Canada who would make himself or herself thoroughly competent to be the teach-
er, philosopher, and guide of young Canadians. There is, perhaps, no other study which informs the mind, enlarges the intelligence, and supplies material for thought and instruction, in the same degree as history ; and there is certainly no history which should have greater interest for Canadian readers than that so felicitously dealt with in Parkman's volumes. We feel that The Educational Journal Publishing Company is rendering a real service to its subscribers by putting this most valuable work within their reach, at a greatly reduced price, and on easy terms of payment. We do not think such an opportunity has before been offered in connection with this work, and it is doubtful whether such an offer will again be made in a long time. The value of the other offer will also be readily appreciated. The reduction in price for a standard history of dates is very liberal.

In some shape or other the idea pervades a great deal of what is said and written in advocacy of higher education, that it is something which is, in its very nature, intended for clever young men and women, and not for the commonplace; that it is a waste of time and money, and tutorial and professorial energy, when it is attempted to put dull boys and girls through college or university. Parents are encouraged to fit their bright sons for college, and chided for seeking the same advantage for the dull ones. Now, from the highest point of view, are not such an idea and such a practice worthy of all condemnation? If the true use of education is to cultivate and develop the powers of the child, thereby increasing his sources of enjoyment, as well as his capacity for service, does not the duller boy or girl need all the aid that can be given by a course of thorough culture, even more than the brighter one? What moral right has a parent to refuse to the child which has greatest need of all the advantages of a full course of study, the boon which he is ready to bestow upon another to whom he fancies Nature has been more generous? It seems to us that parents are sometimes not only reprehensibly partial, but even deplorably cruel, in this matter.

## Englísb.

All articles and communications intended for this department should be addressed to the English Enitor West, Toronto

## THE RAVEN.

I, A. freeman, f.a., headmaster waterdown high school.

## part i-stanzas i-6.

The occupant of the room.
Time, place, season, and surroundings.
Physical and mental condition.
Mental occupation.
The tapping : its first explanation, a visitor second, the supernatural ; third, the wind.

PART 11—STANZAS 7-12.
The Raven.
Its nature and appearance.
The impression created.
Effect of its first answer.
Effect of the word acted on by the stillness.
Explanation of the word.
Further explanation sought.

## Part III-STANzAS 13-18.

"Nevermore" first associated with Lenore.
The link -the chair.
His first interpretation - he shall nevermore be tortured by his memories of Lenore.
If he is not to forget, is there to be healing for his heart's wounds?
If there is not to be healing, is there to be reunion after death?
He would be as he was before its coming.
What the raven typifies.
"The Raven" is a poem that for its careful composition, its musical sound effects, its peculiar metre and versification, its werrd character, and its bold and lofty climax, easily asserts its right to a place in the first rank of English verse. In the oraer of its composition, too, it is striking and exceptional ; for it was with the concluding clımax it began, and afterwards the various details leading up to it were elaborated.

In the notes to the High School Reader an excellent sketch is given of the lines upon which, if we are to believe Poe hinself in his "Philosophy of Composition," the poem was composed.

He began, we are told, with the stanza commencing :
"Prophet," said I, "thing of evil! prophet still, if bird or devil!"
And you will observe carefully in the poem how he leads up to this point of intense climax and thence advances to the conclusion.
At the outset notice the threefold division of the poem, each division consisting of six stanzas, and bringing to a conclusion a distinct topic.
In the first your attention is drawn to the lover and the circumstances affecting him. His surroundings are most dispiriting.
It is dreary midnight-the hour when man is at his weakest, when his secret soul is shaken most with fears, when
"The graveyard in the human heart Gives up its dead."
The season is bleak December, most depress. ing of all months, when the low heavens seem to mourn the death of summer, and often, further south, the cold, driving, sleety rain beats incessantly upon the roof and drips, drips, drips from the leafless trees upon the dead, sodden leaves beneath.

Outside was a wall of darkness, so dense as to be almost palpable-darkness and tempest. Within, the fire was dying down upon the hearth, and the last embers flaring up cast on the floor fantastic shadows that wavered backward and forward, pointed, nodded, beckoned, and vanished. And away out yonder, under the blackness, the rain, perchance, was sinking deeper and deeper into the cold clay that was the only shelter of his loved one from the storm, and above, the chill, shrill wind was moaning that loved one's dirge.

The occupant of the room is in perfect harmony with his surroundings. We see him to be not one like
"That tower of strength
Which stood four comered to the winds of heaven";
not one of those strong sons of earth "who fall to rise, sleep to wake, are baffled to fight better"; but he is rather the direct antithesis-"a man reserved, isolated, dreamy, of high-strung nerves and fantastic moods, with senses excessively acute, and a mind easily accessible to motives of dread." He does not weigh and reason; he is raised to a height at one moment, to be dashed into an abyss the at one moment, to be dashed into an abyss the association and follow it to the most unreasonable conclusions. He is now physically prostrated; worn out with unavailing grief and his futile efforts to free himself from it; and his pale scholarly face to free himself fron it; and his pale scho
is deeply worn with wave-marks of care.
His physical weakness is but the reflection of his mental condition. At every moment there is before his sight the face of his peerless love, his love among the angels-his love lost forever. In loneliness he broods over his loss and seeks relief, not in healthy intercourse with his fellow-beings, nor in active physical pursuit; but he sits apart in that chamber which sbe whom he is striving to banish from his thoughts had so often brightened with her presence. There where her absence constantly makes him feel

## "A loss in all familiar things"

he drives himself, through hours that seem unending, to pore over old and curious books that only feed the malaria of his mind.
At length, worn with grief to the exhaustion point, he almost finds relief in forgetfulness. His breathing grows more regular, his head nods ; but just at the moment his nerves are relaxed, he is awakened with a start by a rapping, which, in his awakened with a start by a rapping, which, in his
confusion, he supposes to have been at his chamconfusion,
ber door.
Enough to startle a strong man, in his physical and mental condition it almost unnerves him. He tries to reassure himself by the sound of his voice. He repeats again and again that it is only a late visitor ; but his mind and his lips are at variance. He moves towards the door. He starts nervously; he has only touched a curtain, but its rustle has blanched his cheek. Strange and terrible fears dart through his frame, and in his ears he can hear the throbbing of his heart.
He stands hesitating, keeping up his mechanical repetition, but at length he recovers somewhat from the alarm of his sudden awakening; his courage returns and his hesitation leaves him. Fear had benumbed him into silence or meaningless repetition. Now the relapse from it unloosens his tongue with a tendency to talkativeness; and he makes an apology, void of offence to either sex, at his visitor on the other side of the door, then hastily throws it open.
There are over four lines of apology, but one word is sufficient to convey the shock of his discovery "darkness." Then in his mind ensues a climax of sensations-wonder, fear, doubt, dreams. First he peers into the darkness in wonder-wonder what can have caused the rapping; the wonder unsatisfied grows into vague, chilling fear; the fear, unchecked by reason, rises into doubt-doubt of the relation between the living and the dead; the doubts entertained swell into those awful dreams -dreams that would annihilate space and link two worlds-dreams that would scale heaven and set him face to face with his angel love.

Then through the darkness is sent a whisperthat whisper, one word-that word, a name-that name, a question-" Lenore"! His physical eye strives to pierce the black depths around him, half expecting to see start from them something loved yet terribie. His mental eye seeks to penetrate the thick night of darkness that shuts out the mortal from the eternal world, and his ear is strained to catch the sound of an answering voice from the departed spirit. But to his eye comes nothing but blackness, and to his ear, borne back upon the wailing wind, comes only the empty echo of his own whisper. Thereupon he turns back into the room, with the pallor on his face of one who, while in the body, has dared to hope to hold converse with the dead.

Presently the voice is repeated; more reassuring now, for it sounds louder. But this time he is less confident of his ears. He says not, "Tis some visitor," but "Surely, surely that is something at my window-lattice." As before, he tries to talk up his courage, and asserts the cause with much more confidence than conviction. He has satisfied himself it is no visitor, so his mind seeks another solution; and, being at the window, he associates it with the wind.

This brings us to the end of the first part. It will be seen that the whole has been so contrived as to produce a highly suspensive effect. The incident of the tapping is referred to in the first stanza, again in the third, the fourth, and the sixth; but still the explanation is delayed; only at each delay the interest is raised and the apprehension increased. It will be felt also that the irregular metre, the peculiar combination of lines, the novel rhyme and mid-rhyme, are in perfect keeping with the weird character of the poem. Other striking features are the handling of the refrain, the recurrence of the same vocal sounds, the same order of syllabic structure, and the new presentations of one idea. These were the outcome of Poe's intense love of music; and it was by these means he appropriated its effects until his verse stood on the borderland between poetry and music.

Here begins the second part. At once we perceive a sharp contrast. Instantly the painful tension is relieved. It is mirth struck sharp on despair; the fearful dreams give way to smiling. The cause of this revolution is nothing else than the entrance of a sorry, tame raven whom the storm has driven to take shelter, and whose eye the light shining from the lattice-window has attracted.

Part of this sudden revulsion of feeling is due to the natural rebound from intense dread. But the raven, as pictured at its entrance, is a grotesque enough thing to produce the result alone.
Get a clear conception of the bird once for all, for to you it is throughout nothing but a poor, bedraggled raven, mournfully croaking its one hopeless word-"nevermore." But not so to the lover. At each moment it is a new creation. To his distempered imagination, sitting ever in the echoes of his grief, the bird's chance word aptly spoken and its ominous character, chiming in with the trend of his own thoughts, cause it to present itself in a variety of aspects of ever-increasing intensity.
It enters the room with its. feathers tossed and bedraggled by the storm. It tidies up a bit as it proceeds. It flutters, and bustles, and shakes itself; it flirts its wings, I fancy, with some of that comical movement that to the humorous eye of Mark Twain suggested that its cousin, the blue-jay, was winking with its tail. Then when it has completed its impromptu toilet, from the length of which the suspicion is strong that it must have been a male bird, there ensues no awkward pause, no waiting for an invitation to make itself at home. With a charming disregard of the sacred rights of property it enters on possession, and gravely and complacently perches, like a great black headdress, on the bust of Pallas of the Grecians, Pallas, the Goddess of Learning ! Dagon of old was upward man and downward fish; the raven is a harlequin with the dignity of a Chesterfield ; a clown with the gravity of a philosopher.
This ludicrous appearance, this royalty in rags, has an instant effect on the occupant of the room. The spectre of his dread quits his heart; his sadness turns to smiles. He addresses the bird in raillery, showers epithets upon it, humorously assures it it is no coward, and asks what his visitor's lordly name may be.
To his surprise there comes a distinct reply"Nevermore." But the surprise is simply due to hearing it speak so distinctly; he feels no relation between the answer and the question. Here begins anew the climax of those moments when he sought to penetrate the darkness-wonder, fear, doubt, dreams.
The word so earnestly spoken begins to work its spell-the word, the unnaturalness, the silence, the loneliness, and the persistent trend of his own mind. The syllables uttered, there is not a sound or a movement to arres: the downward inflection of his thoughts. So long is it continued that, at last, he mutters to himself, so low as not to break the stillness
"Other friends have flown before:

## On the morrow he will leave me."

The words addressed to himself are answered by the raven. Before, he was filled with wonder at the distinctness of the reply; now, he is startled at its relevancy. He tries to satisfy himself with his own explanation that the bird has caught the hopeless word from the repetition of some unfortunate master. He still smiles at the bird, but now for the first time he calls it "ominous." He professed to accept the explanation of its repiy just given ; nevertheless, he sets himself to "linking fancy
unto fancy," to determine what it means. He is seated in the cushioned chair in which she had sat ; there is still a smile upon his face, but there is tragedy in it, for it is his last. The two fatal fancies are all but linked.
Here the third part commences. Now he speaks not a word to the raven. That last apt reply to his muttered thoughts has filled him with uneasiness ; the bird's eyes seem to burn into his heart and read its inmost secrets. He seeks to divine the meaning of its perplexing word-" This, and more." Thoughts more or less indefnite about his lost love iritermingle themselves with it. Those two fancies-the persistent undercurrent of his sadness and the momentary upper current of wonder excited by the raven's word-are in his mind, awaiting but some touch of association to make them one. He reclines in his easy-chair; his head rests upon the velvet violet lining; his eye catches its rich, changing sheen under the glowing lamplight; swift as a flash the two fancies are linked:

## "She shall press, ah, nevermore !"

First, his feverish imakination grasps at a glad interpretation. He believes that he is nevermore to be wasted by that burning memory. A sweet breath as from an angelic censer seems to exhale into the room, and into his ears steals the music of their footfalls. Transported beyond bound, he cries in ecstasy that Heaven, by these angels his fancy has conjured up, has sent him final relief from his torturing memories, and offers to his own lips the cup that is to make him forget forever.
The answer dashes him down into a depth as low as his hopes just now were high. Now the bird becomes a " prophet," a "thing of evil." No trace in it now of that "ungainly" fowl at which he smiled. Then, in raillery, he called it "no coward"; now it is "desolate," yet "undaunted." But a moment ago the room was perfumed from the censer of unseen angels; now it is a "desert land," a "home by horror haunted." Just above he expressed no syllable to it, but now he implores it as prophetic to answer truly; he reiterates brokenly-"Tell me"-"tell me-tell tie"-"is there-is there balm in Gilead?"
If he is not to drink the cup of forgetfulness, yet is there to be healing for the canker of his heart's wounds? And again there is the same reply.
But the answer leaves yet a deeper depth into which he shall sink:
"Down into the dark abyss,
Down into the dark aby
Into the infinite abyss
From which no plummet or rope
Ever drew op the silver
Ever drew up the silver sand of hope!"
See how it progresses to the climax! The bird is still a "prophet," a" thing of evil." But there he implores it in broken repetitions; now he adjures it by the heaven that shall judge them, and the Supreme God. Then he would learn if in time there should be balm for his wounded mind; now he would know whether in eternity he shall clasp once more his peerless love. The moment is awful; the question, supreme; the results, eternal; the answer-fatal!
With that answer which his question has courted he starts from his chair ; he calls him "fiend"; he would think him no longer a prophet, but would believe his word a lie. He has caught a glimpse of a deep within a deep over which he is impending. With horror he shrinks back from the view. He asks now for no healing - no lifting of the veil that hides the future. He only prays that he may that hides as he was; that his loneliness be unbroken; that the bird be as a hideous dream with no remindful trace of its presence. But the cruel word denies his prayer.

With this answer ends his mental struggle to throw off that baleful influence. Now we see a final and figurative view of the raven; and in its demon eyes, its ever-abiding presence, its unlifting shadow on the soul, we read its meaning-mournful and never-ending remembrance.

But will it end there? What is the logical conclusion, in nine cases out of ten, of such a mental and physical condition? Can our imagination reasonably perceive the outcome? Right before him can we not see the dread climax of all? For that shadow will rest like a pall on his uneasy sleep, will darken the day at awakening, will sit with him at the board, will demand a share in his walks darkest always in the sunshine and amid the gaiety of life; till across his path therefalls a deeper
shadow, that makes the breath catch and the flesh creep, beyond which he sees amid a lurid gloom, beneath heaped up storm-clouds, the setting-the voluntary blotting out-of a life once fair, willing, in order to escape from itself, to test the great unknown ; either to sleep with kindred clay the silent eternal sleep of the grave, or answer to a justly offended God for the life he had received and thrown back.

## QUESTIONS.

A.B.: Please parse the italicized words.
(I) Their being neighbors only made it the more embarrassing.
(2) Granted that, men continuing as they are, there must be war ; What then?
(3) "Vice is a monster of so frightful mien, as, to be hated, needs but to be seen."
(4) They gave him knowledge of his wife's being
there. I laid her down,' restrictive or connective?

Ans.-Being is pres. part. of the verb "to be." Neighbor is a noun in the pred. (nom.). The clause "their being neighbors" is the subject of the verb " made."
(2) Continuing is a pres. part., agreeing with men and forming, with its subject and its predicate modifier, "as they are," an independent or absolute clause. In its relation to the complete sentence it is equivalent to "if men continue as they are," and consequently constitutes the conditional part of the sentence.
(3) To be hated is inf. pass. of the verb "to hate." It is a gerundial inf., denoting purpose. A partial transposition of terms will make both the meaning and the grammatical connections clear. Vice is a monster whose mien is so dreadful that it needs only to be seen to be (in order that it may be) hated. To be seen is inf. pass. of " to see," and is dependent upon "needs," of which verb it is the direct object. But is here an adverb, equivalent to "only."
(4) Being is the gerund of "to be," in the objective, after the prep. " of." (Substituting some noun, as "sickness," for "being there," we readily see that the gerund is, to all intents and purposes, a noun, while retaining so much of its verb force as to be modified and completed in meaning by the adverb "there.")
(5) Where certainly has no restrictive force in this sentence. It has, clearly, a certain connective force, and so may not improperly be called "connective," though, as that is not its chief force or use in the sentence, we do not quite see the necessity for qualifying it by either term. If, however, your system of grammar makes the two classes you name exhaustive, and the word has to be placed in one or the other, it is "connective."
"A.B." finds some difficulty in distinguishing between the gerund and the verbal noun. This difficulty may, perhaps, be diminished or obviated by remembering that the verbal noun is a noun pure and simple, the adjective merely denoting that it is derived from a verb. It is used in all respects as any other abstract noun. The gerund, on the other hand, retains, in addition to its substantive meaning and use, to a certain extent, its verb force (governing a case, being modified as above by a predicate noun, or an adverb, etc.).
G.E.E.-(I) What does "his" refer to in "John has my book and I have his"?
(2) Explain difference between and give example of participle phrase, and participial phrase.
(3) Explain the difference between the restrictive and the descriptive force of the relative pronoun
(4) Why should we excuse Longfellow for not writing truthfully to history in Evangeline? What is his chief defect as a poet in the poem, and what his best point?
What is the chief characteristic of Evangeline herself ?

To whom does "he" refer in line 608?
Explain lines 328, 329.
Ans.-(1) His refers to "book" understood, "I have his book.'
(2) "Participle phrases" are simply those forms of the participle which require the aid of auxiliaries They are four in number, viz., perfect active, per fect progressive active, both formed with the imper fect participle ; and progressive passive, and perfect progressive passive, both formed with perfect passive participle. For example: having seen,
having been seen ; being seen, having been seen. We are not familiar with "participial phrase" as a technical grammatical expression, but it is evident that the term, if so used, must mean either a phrase formed from or consisting of a participle, or a phrase which pelforms the function of a participle.
(3) The relative pronoun may be said to be restrictive when the clause which it introduces restricts or limits in its application the assertion made by the predicate in regard to a class (the subject) to one or more individuals, or to a sub-class, of the larger class. E.g., The cherries which the birds have pecked are sweet. The use of the relative clause here is clearly to restrict the application of the predicate "sweet," which would otherwise apply to all the cherries, to the smaller class denoted by the relative clause, viz., those which the birds have pecked. But in the sentence, "My friend, who is very tall, come forward," the relative clause merely describes the individual.
(4) We should not excuse him if there is evidence of any serious misrepresentation of historical fact, through intention or prejudice, or even through ignorance, if the means of knowledge were fairly within his reach. But we should remember that he was writing not history, but poetry, and grant him the poet's privilege of throwing the halo of imagination around the sober and sombre facts of history. In the case of a poem of this kind the facts of history furnish merely the groundwork and a certain part of the material for the structure which is built up and adorned by the creative imagination. As a matter of fact, we do not suppose that Longfellow had within reach the means of knowing the true history of the event which he so pathetically describes. He had not Parkman at his elbow. The question of defects and merits is largely a matter of opinion. Literary criticism is not an exact science. Probably the use of the "scarcely rhythmical" English hexameter for the metre is the worst blemish of the poem, and its minute and charming delineation of primitive rural life and American scenery its greatest merit. But it abounds in minor merits and defects. As to "Evangeline," each reader had better form his own conclusions. "Sunshine of St. Eulalie," the poet himself significantly says she was called.

Please quote the lines in the other poems referred to on which you wish explanations. It is not sufficient to give the number of the lines, as they are not numbered in ordinary editions. We cannot be sure what lines and words you refer to.

Other questions answered in next number.

## TRIALS OF A BEGINNER.

Why don't some of the teachers tell us of their trials outside of the schoolroom, also some laughable incidents? And why don't they confess their early failures and let us know that our schools are no worse than some of theirs were? When I began to teach in the country, I knew my pupils would learn if they would only "behave," and I have spent several years in finding out what will make them "behave."
It is hard to go into a strange neighborhood and quickly gain the confidence of strangers, but, after I gained the respect of the parents, I had no trouble with the children. Perhaps it is with other young teachers as it was with me, I dared not confess any trouble I had at school at my boarding-place, or it quickly flew over the neighborhood and the children heard how nearly they had conquered.
And I wonder if others have had the same "big boy"-not the biggest in the school, but taller than the teacher-who was always respectful, but who was naturally restless and kept his part of the room out of order?
I beligve the teacher's social work outside of school hours determines her control of the school. Take an active interest in the affairs of the neigh. borhood and the place will not seem so dull.-The Popular Educator.

Teachers should ever be students. No teacher can succeed who is content to remain in a state of rest, or who stops to ask the cost of his labor or what will be his reward. The world owes nothing to its contented men and women. Contentment means decline. The only way to do well is to strive to do better. This law of growth through striving is as universal in its application as the law of gravitation. A teacher without an ideal-an ever-movable ideal is intellectually, if not morally, dead.-Patrick's Pedagogics.

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## Editorials.

## ARBOR DAY

WE beg leave to remind inspectors, trustees, teachers, and all others interested in the improvement of the schools, of the desirability of beginning without delay to mature plans for turning the coming Arbor Day, now only about a month distant, to the best possible account. The first and highest consideration to be kept in mind, according to our way of thinking, is the good of the school children themselves. The first and chief aim should be the educational one. The best use of the day is that which makes it the most real and influential factor in cultivating the taste. As one of the most effective means of doing this, the aim should be to improve the school surroundings, within and without, both in appearance and in actual comfort. Whatever improves the school grounds, be they small or large, in respect to cleanliness, comfort, neatness, and, if possible, beauty, contributes to this end. Time and labor judiciously invested in supplying missing trees and shrubs, and adding choice new ones ; in clearing-up, levelling, grading, and, where circumstances permit, planting and cultivating flowers, flowering
shrubs, foliage plants, etc. will give rich returns in the development of taste and refinement, keeping, as they do, an object-lesson continually before the eyes of the pupils during the whole schooi year. The same is, of course, true of internal improvements and decorations. Who can calculate the effect which may be wrought upon the whole future life of many a child, through the medium of the eye, as it rests daily and hourly upon walls tastefully tinted and embellished with well-chosen prints, engravings, mottoes, etc., such as are within the reach of every school district in the land? It will be a grand thing for the future of the country if trustees, parents, and teachers will but form the habit of looking forward to Arbor Day, from year to year, as a day to be provided for by the preparation of some gift, in the shape of a picture, a bust, a motto, or a cash contribution, for the improvement of the rooms which are the homes of their children during, probably, by far the greater portion of those waking hours which are spent within doors. If the teacher has won the right place in the esteem and confidence of parents and children, and is capable of appreciating the importance of this work, what transformations may be wrought from year to year, in the attractiveness of the schools, and so in the self-respect and dignity of the profession!
And what transformations have been already wrought in Ontario during the few years which have passed since the establishment of the annual Arbor Day! Let your imagination range over the province for a few minutes, taking a bird's eye view of what has been done in and about the school yards during the last ten years. The following statistics, from the report of the Minister of Education for :895, will materially aid the imagination in its task: "In $1885,38,940$; in 1886 , 34,087 ; in 1887, 25,057; in 1888, 25,714; in 1889, $21,28 \mathrm{I}$; in $1890,22,250$; in 189 I , 15,697; in 1892, 14,489 ; in $1893,14,103$; and in 1894, 14,244 trees were planted." That means that considerably more than two hundred thousand trees have been planted on and around the school grounds of the Province in the last decade. Was this work worth doing, do you think ?

## SCHOOL LAW AMENDMENTS.

WE are indebted to the Globe of the 26 th ult. for a résumé of the amendment proposed by the Ministers of Education in the revision of the School Acts. Probably the most important of these, so far as the Public Schools are concerned, is the provision to be made
for "continuation classes" in the Public Schools, under certain conditions. This innovation is designed to meet the wants of small towns and large incorporated villages which do not feel able to support High Schools, and yet feel the need of some arrangement whereby the children of parents who desire it may be enabled to continue their studies for a time without incurring the expense and inconvenience of being sent away from home.
"To meet such cases," says the Globe, "t the new Public Schools Act provides for the establishment of continuation classes in the Public Schools, where the course of study required for a third-class certificate can be taken at trifling expense. The Act provides in such cases that pupils who have finished the Public School course may be charged reasonable fees; that other pupils who have not completed the Public School course, but who have passed the Entrance Examination, may be admitted free of charge, on the principle that every child in Ontario is entitled to a free education until he has passed the fifth form of the Public Schools. The teacher to be employed for continuation classes must possess the qualification at least of a High School assistant, as a guarantee of the efficiency of the work to be done. The Government proposes to aid such schools with a grant per pupil equal to that now given those in attendance at High Schools. The County Council may give such grants as it deems expedient, but a county grant is not compulsory. It is expected that between the fees, the Government aid, and such rates as may be properly imposed for the free education of pupils who have passed the Entrance Examination simply, the saiary of one teacher can easily be provided. Pupils who have finished their course at the continuation class, and who desire to matriculate or to obtain a higher standing, will, as heretofore, be required to go to the High School. One advantage of the scheme is that for two years of their High School course, at least, pupils will re ceive their education at home, under the eye of their parents, at less expense than if sent to a neighboring High School. Continuation classes are permissible only in a municipality where no High School has been established.

## SOME INTERESTING STATISTICS.

THE last volume of the Massachusetts Labor Report contains, amidst other statistics, some interesting facts with reference to the difference in the remuneration of men and women for doing the same work. In no occupation, it appears, is the discrepancy in this respect so marked as in that of teaching. Of two hundred and fifty college-bred women who replied to questions on this point, one hundred and fifty said that men received more pay than women for the grade of work in which they were em-
ployed; ninety-five thought that both sexes received the same payment; and five that women received more than men. Were such an inquiry made of the teachers of Canada, there could scarcely be found room for even so much difference of opinion. The scales of salary adopted in such cities as Toronto set the facts clearly before us, and show that the school boards find it easy to obtain, and expect, as a matter of course, to obtain, the services of the most competent women in a given grade for considerably less than they would expect to pay were a male teacher of equal standing being engaged for the same work. We believe, however-and we shall be glad to be corrected if we are in error-that the degree of the discrepancy decreases rapidly in proportion as the grade of the work, and, consequently, of the qualifications required, is raised. Now that women, by taking full university courses and otherwise, are fitting themselves to take positions as assistants and specialists in High Schools and Collegiate Institutes, we have the impression that the distinction in point of salary is rapidly disappearing, if it has not already disappeared, in those institutions.

An analysis of the Report, as given in The Outlook, affords some specific instances which set the logic of these distinctions in a striking light. One teacher told of a High School in the city of New York in which she is employed which paid the woman having charge of the girls' department from $\$ 500$ to $\$ 700$ less than the man having charge of the boys' department, although the girl pupils were three times as numerous as the boy pupils. Another teacher described a school in which a man was paid more for presiding over a division which was always out of order than a woman was paid for presiding over a division which was always in order. In this case, by mutual consent, the man and woman changed divisions, and order followed the woman. "But," says the correspondent, " the wages were not reversed." In such cases as this, the custom of society, the disposition of men to demand more, and the willingness of women to accept less, were assigned as the reasons why men were better paid than women. But other reasons were clearly recognized in the correspondence. The following are typical answers:
" Only a small percentage of women have any ambition to conduct business for themselves. The lack of this desire soon makes machines and drudges of many clever persons."
" There are not enough women qualified to compete with men in the higher lines of teaching and supervision to command
the same confidence in them as a class."
"A woman's work is often inferior to a man's in the same grade, because she is apt to take up work as a temporary necessity. She, therefore, does not feel that desire to learn her profession thoroughly that a man feels."
"The small number of occupations open a few years ago, and the still smaller number considered refined, made tremendous competition for all those positions which could be filled ,by a woman having little special training."
" In many cases women undoubtedly do as good work as men, and often better; but the fact can never be overlooked that permanency in a position is of great value to an employer. In a woman's case she frequently gives up her occupation just as she becomes most proficient.'
"In the majority of cases women are paid less than men for what seems to be the same work, but men in the same positions are worth more to their employers, for the reason that any employer is free to call upon a man for any extra work. For instance, in a railroad position, such as mine, a man could be called upon at a few hours' notice to take a long trip, possibly travelling on freight trains, would go to the bank in the worst of weather, etc. But what employer would call on a woman to do these things?"

Nearly one-third of the women answering the question found that difference in physical or mental ability caused the difference in pay for men and women; half the remainder ascribed the fact to the excessive competition for the positions which women would willingly take, and the remaining third attributed it to custom.

We have no doubt that the above instances of seeming strange inconsistency and injustice could easily be parallel. ed in Canada. We cannot deny that there is a good deal of force in some of the reasons assigned for the differences, especially in the last two named.

Still, the inconsistency and injustice are marked in many cases, and should cause employers, and the public, whose servants they are, to blush. So long, however, as so many young women holding certificates are not unwilling to accept, and even canvass for, situations, at the ridicuously and deplorably low salaries now received by hundreds, even when their success means the dismissal of more experienced and better qualified teachers of either sex, the women who suffer the injustice must throw a large share of the blame upon these younger sisters.

## EUTHANASIA OF INSECTS.

REPLYING to editorial remarks in a former number, Mr. Fred. A. Clarkson says:
" I am sorry that I omitted the directions I gave my class for handling insects. We usually place the victims in a box and kill them with chloroform, or, in case
that is not handy, with the fumes of a match. In writing the lesson, I was thinking more of the method of observation than of anything else, and so overlooked this part. Then, too, I usually supply the specimens myself.
"With your views in regard to kindness to animals, etc., I cannot entirely agree. Children should certainly be tanght to treat dumb creatures kindly, but I'm afraid I draw the line at flies. If not, then the makers of fly-poison and of sticky fly-paper should immediately be arraigned for cruelty. And what about those wicked men who maliciously fill the stomachs of the innocent potato-bug with Paris green, and bring on acute peritonitis? "
Why should children "be taught to treat dumb animals kindly"? If they should, why should their teacher be disposed to "draw the line at flies" ? What reason can be given for the one obligation which does not apply to the other? Can it be shown, or is there any good reason for believing, that the fly or other insect does not suffer just as keenly under torture, in proportion to its capacity for suffering, as the larger animal ? It will scarcely be denied, of course, that there is a difference in principle between killing a brute or insect by inches in schools for purposes of observation or experimentation, and killing it by the least painful process, when its death is necessary for the well-being of the lord of creation.

To our thinking, Mr. Clarkson's ques. tions prove nothing, seeing that an answer, the opposite of that which he seems to expect, does not involve an absurdity. We are very much inclined to think that both the makers and the users of sticky fly-paper should be arraigned, at least at the bar of every heart which " loves mercy," for cruelty. Of course it is easy to pay no attention to such a trifle as the agony of a fly. But it is one of the offices of a mind to think, and to interpret phenomena, and we venture to say that if anyone of keen perceptions and sensitive organization were to sit or lie near a sheet of fly-paper, on which a hundred flies were helplessly glued by their feet, listen to the weary buzzing of their wings as they keep up, hour after hour, their frantic efforts to escape, and if he should allow himself to realize through imagination all the weary agony which precedes the final yielding of one after another to the living death from exhaustion, that person would never again use that kind of fly-paper for that purpose. Of course, the poisonous preparation, which kills quickly, is a different thing, as is the use of a speedy poison to destroy the potato-bug.

The object-lesson was all right, and a very good one. We shall be thankful if Mr. Clarkson will favor us again.


ANGUS McINTOSH<br>Headmaster Boys' Model Schoul, Toronto, Ont. With the assistance of several special contributors.

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HINTS ON READING.

## by mir. r. w. murray.

Anything that may be given on this subject is intended merely to offer suggestions, and, in that way, be helpful to teachers who are trying to bring their classes to some degree of excellence in reading. The suggestions offered are intended more particularly for the teaching of the subject to the senior pupils of the Public Schools.
Ability to read well presupposes power to thoroughly understand what is read, and power to give expression to this in a clear, strong, and effective manner. Some will be able to understand shades of meaning quite unnoticed by others, and, if they have the second requisite, their reading will be superior. Others, again, are defective in voicepower, and are quite conscious that their reading is not up to the standard that they have set for themselves, even though their appreciation of the meaning of the selection may be of a high order.

When a teacher succeeds in securing from the pupil that effort that shows he is thoroughly master of the thought to be conveyed, and, at the same time, is able to so forget himself, for the time being, as to give expression to that thought as if it were his, then the difficulty in teaching readirg is largely overcome, and the exercise becomes one of the most enjoyable to both teacher and class.

Natural tone, pitch, and rate. When the pupil makes his first attempts at reading, he should not be permitted to use a tone different from that he uses in speaking. He will be apt to read empha. sizing every word, because he is yet slow at wordrecognition. This should be avoided. And, on
the other hand, he should not be allowed to memorize the short statement, and to give it without, at the same time, recognizing the words.

Vocal gymnastics. Some take exercises in the cultivation of the voice, independently of the reading lesson; but it appears to be more reasonable to take such exercises, in connection with the reading, as are found to be necessary. In this way pupils see the application of them, and, in consequence, value them more.

Preparation for reading. Lessons on the literature of the selection will precede the reading lesson. Pupils will now understand fully the thought. the construction, and the language of the lesson to be read, and the reading exercise will be confined to the expression of this thought, and to the criticism of such expression, having in view its improvement. The criticism of the reading will lead to superficial and mechanical results if it is not such as constantly refers the pupil to the meaning to be conveyed; hence the absolute necessity of a thorough knowledge of the literature. This criticism should lead the pupil to think the meaning, rather than to direct his attention to rules and to technical terms. If the attention of the reader be directed to rules, or to the necessity of emphasis on this word or on that, then he will, to a greater or less extent, be reading without that effect that is gained when the reader thinks the meaning as he reads.
It has been suggested that a few hints might be given bearing upon the reading of one of the special lessons to be studied for the Entrance examination. It will be readily conceded that it is difficult to say what should be done, by way of criticism of the reading, in the absence of a class. Most of the questioning would be governed by the character of the reading of the pupil, and be dependent for its success upon the tact and skill of the teacher in his endeavors to so question as to put the pupil more in touch with the thought of the lesson. However, taking "A Psalm of Life" as the lesson, it may not be found to be out of place to confine the attention to it, and to try to show what would be done if a class were actually reading.

After the literature of the lesson has been taken, an analysis, such as the following, may help to form a basis of the teacher's criticism and a guide to the pupil in his reading :

[^0]Stanza 5. Life an activity. Where?
6. Life an activity. When?

Stanzas 7-8. Life an activity. How?
Stanza 9. The "Bugle Call" for activity.
The Reading: Stanza 1.-The pupil, having read this stanza, may have made errors which are the result of not bearing in mind the general thought to be expressed.

Questions.-What is the command given? What is the general argument given by the author for his disbelief of the statement of 1.2 ?

These and similar general questions will be found to have some effect, and the reading, still being defective, the questions will now be required to lead the pupil to think the thought more in detail. What is said of the dream in l. 2? What in 1. 4 shows the unreality of a dream? Another attempt by the pupil should lead to stronger expression, and, with the reading now given by several others, the teacher may proceed to the second stanza. As the lesson advances, the first effort in reading a new stanza will be found to be in the line of improvement, thus showing that the pupil is gaining in power of expression.

Stanza 2.-This stanza will be found to present some difficulties. The pupil may read 1. I, with the falling inflection on real and carnest. If he does, he is not keeping in touch with what has been said in stanza 1 .

Questions.-Tell me that life is real, and, in saying these words, deny its unreality. What is the special thought of 1.2 ? How would you read 11. 3,4 to show that the words of 1.3 were spoken of the body? It would be well to dwell on this stanza until it is wellread, because of its importance. Very few pupils would fail to give emphasis to "life," "real" "earnest," " grave," "goal," "not spoken," "soul," etc., and to pause after "and" in 1. 2 , if they are thinking of the meaning. Sometimes help can be given to those who fail by bringing the eye to their aid. This is better done when you are certain that the pupil understands the thought well, and yet does not express it with that power so much to be desired.

Life is real! Life is earnest!
And I the grave is not its goal ;
" Dust thou art, to dust returnest"
Was not spoken of the soul.
Stanza 3.-After reading, the following questions will indicate the criticism. What are not to be considered as the objects of life? What the object of life? What should be the feature of thisactivity? What contrasts are made in this stanza? When these questions are intelligently answered the emphatic words will have their emphasis in the reading. Question so as to lead the pupil to pause after "and", 1. I, "end," 1. 2, "but," 1. 3, and before and after "farther," etc.

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Stanza 4.-The construction of this stanza presents some difficulty, and he who reads it well requires not a little knowledge of phrasing, and of pitch in reading.

Questions.-What is said of "art" in contrast with what is said of "time"? What is the reason given why life should be active? Omit the words "though stout and brave" and "like muffled drums," and read it. Now read it inserting these words.

Stanza 5.-Pupils have been found to read 11. I, 2 in too high a pitch for the best effect. What is the important statement in this stanza? What is duty of $11.1,2$ ? What is contrasted with heto? What terms are of a military character? What feeling would be indicated in reading 1.3 , in contrast with that shown in reading 1. 4? It will not be difficult to get the tone of disdain and of triumph.

## In the zoorld's broad field of battle, In the bizouac of life, <br> Be not like dumb, I driven cattle, Be a hero in the strife :

Stanza 6.-The errors made by pupils in reading this stanza will not be difficult to correct. What is the general argument of the author? What is there hinted in $11.1,2$, contrary to the position taken by the author? What ideas are contrasted in II. 2, 3? Are the thoughts complete stated in Il. 1, 2? What is the meaning of the last line?

Stanzas 7, 8.-These stanzas should be read together, that the thought contained may not be interfered with. What is the value of this part of the argument? Has the example of another influence on our acts? What is the reason given why we should leave "footprints on the sands of time" ? Note the close connection grammatically between "another" and "shall take heart again."

Stanza 9.-Pupils who have appreciated the argument, and who are in sympathy with the conclusion of it, will naturally give this "bugle call" in the suitable dominant tone. Question so that the phrasing and pausing may be given correctly in 1. 1. What terms are here used to give expression to the activity of life? Who are to "be up and doing"? What is the meaning of 1.2 ? What are we to achieve and to pursue?

Let $u s$ | then | be up \| and \| doing,
With a heart for any fate,
Still | achieving, | still pursuing,
Learn to labor | and | to wait.
CANADIAN HISTORY-PART II.
Canada Under British Rule.
(1) Military Rule, $1760 \cdot 1774$.
(2) Under the Quebec Act, 1774-1792.
(3) Under the Constitutional Act of 1791, 1792 1841.
(4) Under the Act of Union of 1840 , 1841-1867.
(5) Under the British North America Act, since July ist, 1867.
military rule.
British military rule began in 1760 , and extended to 1774. The following topics should be amplified: (I) What is meant by a military rule? (2) The important changes in government which it introduced into Canada; (3) The temporary character of this rule, and what prospects Canadians had of local self-government ; (4) The condition of the country; (5) The conciliatory policy adopted by General Murray and Sir Guy Carleton towards the French-Canadians; (6) The difficul-
ties experienced in attempting to satisfy both the French and English settlers, especially in the administration of justice ; (7) The compromise: In criminal cases, trial by jury and English forms were observed; in civil cases, the old French laws prevailed.

$$
\text { THE QUEBEC ACT, } 1774 .
$$

In order to effect a definite settlement of the adıninistration of affairs in Canada, the Imperial Parliament passed the Quebec Act.

Terms:-The boundaries of Canada from Labrador to the Mississippi, and from the Ohio to the watershed of Hudson Bay.

The French law, or custom, of Paris was to apply in civil cases, and the English criminal law was to remain in force.

It gave the French the same political rights as the English, regardless of religion. It also gave the Roman Catholic clergy the right to collect tithes from their own people.

The government was to consist of a governor and council appointed by the Crown. The council was to consist of not less than seventeen and not more than twenty-three members, the majority to be of British birth.

It is important to notice how much of the disputed territory claimed by France was given to Canada by this treaty; also how much the difficulties England had with her American colonies on the seaboard at this time had to do with securing to the French-Canadians such favorable terms as were granted by this act.

THE AMERICAN WAR OF INDEPENDENCE:
Causes:-
(I) Old disagreements arising from the unsettled relations between the mother country and the colonies, such as the right of the colonies to take possession of land lying to the west, general trade relations, and the question of taxation.
(2) The Navigation Laws did not allow the colonies to trade with any country except Britain. This led to extensive smuggling.
(3) The Stamp Act passed in 1765 , which was repealed in 1766.
(4) In 1767, a Revenue Act imposing; duties on tea and several other articles. (In 1770 all duties were removed except that on tea.)
(5) Trouble in Boston arising out of the rescue of smugglers from the police. This led to a collision between the citizens and the soldiers (1770).
(6) The consignment of tea, consisting of three hundred and forty chests, thrown into Boston harbor by a party of men disguised as Indians (1773).
(7) Declaration of Rights issued by the congress assembled at Philadelphia in 1774.
(8) Declaration of Independence issued in 1776. Engagements:-
(I) Concord, Lexington, Ticonderoga, Crown Point, Bunker Hill, 1775.
(2) Invasion of Canada-capture of Forts Chambly and St. John, Montreal occupied by Montgomery, siege of Quebec by Montgomery and Arnold, 1875-6.
(3) New York occupied by General Howe, 1776.
(4) Brandywine, capture of Philadelphia, 1777.
(5) The surrender of General Burgoyne at Saratoga, 1777. This was the turning point in the war,
(6) The English, under Lord Cornwallis, defeated and forced to surrender at Yorktown, in Virginia, by Washington and Lafayette.
treaty of Versailles, 1783.
Terms:-
(I) Britain recognized the independence of the United States.
(2) The boundary line between Canada and the United States was defined as follows: The Great

Lakes, the St. Lawrence, the forty-fifth parallel of north latitude, " the highlands dividing the waters falling into the At tlantic from those emptying themselves into the St. Lawrence," and the St. Croix River.

The indefiniteness in regard to the watershed, referred to above, led to the international dispute which was settled by the Ashburton Treaty in 1842.
(3) The Americans were given the right to fish on the banks and coasts of Newfoundland and in the Gulf of St. Lawrence. They were also to be allowed to land for the purpose of drying their fish. the united empire lovalists.
A large number of American colonists who had remained loyal to Britain left the United States at the close of the war and settled in Nova Scotia and Canada. It is estimated that twenty-five thousand sought refuge in the British colonies, and of these about ten thousand settled in what is now the Province of Ontario.

THE CONSTITUTIONAL ACT OF 179I.
This act was passed by the Imperial Parliament in 1791, and came into torce in 1792.

Terms : (1) It divided Canada into two prov-inces-Upper Canada and Lower Canada. The boundary line between the two extended from Point-au-Baudet on Lake St. Francis to Point Fortune on the Ottawa, and thence along the Ottawa River to its headwaters.
(2) Each province was to have a governor, an Executive Council and a Legislative Council, appointed by the Crown; and a Legislative Assembly elected by the people for four years.
(3) The Quebec Act was to remain in force until repealed by the provincial parliaments. In Upper Canada, British civil and criminal law, and freehold tenure of land, were introduced. In Lower Canada, the seigniorial tenure and French civil law were retained.
(4) The Imperial Parliament reserved the right to impose duties for the regulation of commerce ; but the Canadian Parliaments made the collections and imposed taxes for public purposes.
(5) One-seventh of the Crown lands in both provinces was set apart for the support of a Protestant clergy. The Roman Catholic clergy of Lower Canada were left, with the power given them by the Quebec Act, to collect tithes from their own people for the support of the Roman Catholic Church.

This act marks the beginning of parliamentary government in Canada.

The first parliament of Upper Canada met at Newark (Niagara) on September 17th, 1792. John Graves Simcoe was appointed first LieutenantGovernor of Upper Canada.

## PARSING.

To parse a word means literally to tell what part of speech it is. In this sense the application of parsing is very wide, as it must necessarily form a part of every grammar lesson which involves the examination of the structure of a sentence. It must be considered a very important exercise to state the part of speech which a word is and to give its relation, and it is quite likely that this form of parsing is more common than any other which is more minute in detail. However, it is desirable that exercise in complete parsing be given for its value in exactness of statement, and for review of inflection. It may be stated that unless every possible care is taken to have the work done accurately, it may do harm instead of good. This rule will be found to apply with especial force to
parsing : do thoroughly what you attempt, and do not attempt too much.
When parsing a word observe the following rules:
(1) Use no abbreviations whatever.
(2) When any word is quoted, underline it, or use marks of quotation.
(3) Follow some definite order in parsing the different parts of speech.
plan of parsing.
Nouns.-Kind.
Gender.
Number.
Case.
Relation
Pronouns.-Kind.
Person.
Gender.
Number.
Case.
Relation.
Adjective.-Kind.
Degree. Give companson (if
Relation.
possible).
VERB.--Form, whether simple or a verb phrase. Class.
Conjugation. Give principal parts.
Voice.
Mood.
Tense.
Person.
Number.
(Participle).-Form, whether imperfect or perRelation. fec $^{+}$, whether active or passive.

## Adverb.--Kind.

Degree. Give comparison (if possible).
Relation.
Preposition.-Kind, whether simple or comRelation pound.
Conjunction.-Kind.
Relation.
Interjection.--Class. (Enotional, imitative, or abbreviated.) A statement of the feeling expressed, the sound imitated, or the expression which has been abbreviated.

## SOLUTIONS OF PROBLEMS.

1. High School Arith., p. 155, No. 19.

Amount of premium received by the company $=1 \frac{3}{4} \%$ of risk.
Premiums paid, $\frac{20}{60}$ of $\frac{40}{100}$ of risk $+\frac{2 \frac{1}{4}}{100} \times \frac{2 \pi}{100}$ of risk $=\frac{{ }_{5}^{2}}{5} 0+\frac{9}{1805}+\frac{109}{8000}$ of risk.
$\therefore$ net premium retaned $k y$ the company $=\frac{7}{4} \overline{0}$ $-\therefore 090=-\frac{31}{80}$ of risk.
Amount of risk retained $=\frac{55}{100}$.
$\therefore 8 \frac{37}{800} \div 1.35013 \%$. Ans.
2. H.S.A., P. 155 , No. 20 .

Amount of premium received $=1 \frac{1}{2} \%$ of risk.
Premiums paid, $\frac{13}{100}$ of $\frac{50}{100}$ of risk $+\frac{1 \frac{1}{4}}{100}$ of $\frac{20}{100}$ of $\frac{50}{100}$ of risk

$\therefore \frac{1 \frac{\pi}{2}}{100}-\frac{1}{100}=\frac{1}{200}$ of risk, net premium retained.
$\therefore \frac{1}{2} \frac{1}{20} \div \frac{40}{100}=\frac{1}{80}=1 \frac{1}{4} \%$.
3. H.S.A., p. 155, No. 21 .

Premium paid Co. I., $\frac{\frac{1}{4}}{100}$ of $\frac{\$ 25000}{1}=\$ 312.50$.

$$
\begin{aligned}
& " \quad \text { " II., } \frac{10}{100} \text { of } \frac{\$ 40000}{1}=\$ 400.00 . \\
& * \quad " \quad \text { III., } \overline{8} \bar{\delta} \bar{\delta} \text { of } \frac{\$ 100000}{I}=\$ 875.00 .
\end{aligned}
$$

Total amount insured, $\$ 165,000$.
$\therefore \dot{\$}{ }^{-151}$ Co. II.'s share of loss $=\frac{25}{185}$ of $\$ 100000$ $=\$ 151517$
Co. II.'s share of $\operatorname{loss}=\frac{10}{6} \overline{5}$ of $\$ 100000=\$ 24242 \frac{14}{3}$

4. H.S.A., p. 155, No. 21 .

Total premiun $=486 \times \frac{3}{4}$ of value of house $+\frac{3}{4} 0$ of $\frac{2}{3}$ of $\frac{1}{2}$ of value of house $=880$ of value of house. $\therefore$ value of house $=\$ 12.60 \times \pm 93^{0}=\$ 1901 \frac{17}{3}$.
5. H.S.A., p. 156 , No. 33
$\frac{7}{40}$ of $\frac{2}{3}$ of value $=\frac{7}{600}$ of value, premium received by Co. I.
$\frac{30}{20}$ of $\frac{1}{4}$ of $\frac{2}{3}$ of value $=\frac{1}{40}$ of value, premium received by Co. II.
$\therefore$ net loss of Co. I. $=\frac{2}{3}+\frac{1}{40} \overline{0}-6 \overline{\overline{0}} \overline{0}-\frac{1}{4}$ of $\frac{2}{3}$ of value $=\frac{5 \times 9}{120}$ of value.
And net loss of Co. II $=\frac{1}{1}$ of $\frac{1}{3}-\frac{1}{90}$ of value $=1970$ of value.
$\therefore$ Co. I. loses more than Co. II. by $1=00-190$ $=392$ of value.
$\therefore \frac{399}{00}$ of value of property $=\$ 49,000$.
$\therefore$ value of property $=\frac{\$ 49000}{1} \times \frac{1200}{392}$
$=\$ 150,000$.
The owner loses $\frac{1}{3}+\frac{6_{0}}{6} 0$ of value
$=\frac{20}{80}$ of value of property
$=\frac{0}{600}$ of $\$ 150,000=\$ 51,750$.
6, Hamlin Smith, p. 269, No. 88.
Part sold at cost $=\frac{3}{3}$ of $\frac{1}{3}=\frac{1}{40}$.
Part sold at $\frac{1}{3} \operatorname{cost}=\frac{7}{8}$ of $\frac{10}{2}=\frac{7}{40}$
$\therefore$ he received $\left(\frac{1}{40}+\frac{8}{3}\right.$ of $\left.\frac{5}{4^{7}}\right)$ of cost
$\therefore 1$ of cost $=1,0$ of cost.
$\therefore \frac{1}{1}$ of cost $=\$ 1,155$.
$\therefore \frac{11}{12} " c=\$ 12,705$, loss.

## AlGEbra.

suitable for public school leaving.
I. If $x-y=a, x^{2}-y^{2}=b^{2}, x^{3}-y^{3}=c^{3}$, show that $a^{4}+3 b^{4}-4 a c^{3}=0$.
2. Factor:
(1) $3 x^{3}-14 x^{2}-24 x$.
(2) $63 x^{3} y-28 x y^{3}$.
(3) $a^{2}(b+c)+b^{2}(c+a)+c^{2}(a+b)+2 a b c$.
3. Simplify :
(1) $\frac{a^{3}-x^{3}}{a x}\left(\frac{a+x}{a^{2}-x^{2}}-\frac{a-x}{a^{2}+a x+x^{2}}\right)$.
(2) $1+\frac{3 x}{2 y}-\frac{6 x}{2 y+3 x}+\frac{9 x^{2}(3 x-2 v)}{2 y^{y}\left(4 y^{2}-9 x^{2}\right)}$
4. The area of a certain square floor would be increased by 17 square yards if each side were one yard longer. What is the area?
5. Divide the number 90 into four parts, such that if the first be increased by two, the second diminished ty two, the third multiplied by two, and the fourth divided by two, the four quantities thus obtained shall be equal to each other.
6. In an examination, one-fourth of the candidates fail. The number of marks required to pass is less by 2 than the average marks of all candidates, or less by iI than the average marks of those who pass, or double the average marks of those who fail. How many marks are required to pass?
7. How many minutes is it till four v'clock, if three-quarters of an hour ago it was twice as many minutes dast two ?

## NOTES AND ANSWERS TO QUESTIONS.

"Yarrow Unvisited," stanza 5, 1. 3-
"Fair hangs the apple frae the rock."
This line means that the apples which hang from the trees on the rocky bank are beautiful. firae, from.
"Montcalm, with a courage that rose above the wreck of hope, galloped through the groups of his stubborn veterans, who still made head against the enemy, and strove to show a front of battle." $P$. 238, Fourth Reader. The subject of the verb strove is Montcalm.
(I) The leaves are falling ; therefore the swallows will soon be gone.
(2) The leaves are falling; therefore the trees will soon be bare.
In sentence I the clause introduced by therefore expresses a fair inference from, but not a necessary consequence of, the first, and is, therefore, an independent clause.
In sentence 2 the clause introduced by therefore states a necessary consequence of the first, and is an adverbial clause, of consequence.
(1) The swallows will soon be gone; for the leaves are falling.
(2) The trees will soon be bare; for the leaves are falling.

Sentence I is compound; sentence 2, complex.
"But thou would'st not alone
Be saver, my father!"
The noun father is a nominative of address, and not an appositive nominative.
What would lead one to suppose that it is an appositive?

Teachers are strongly recommended to extend the teaching in syntax to Entrance classes, beyond that taken up in the Public School grammar, along the lines laid down in the High School grammar.

In the next and subsequent issues of THE Journal will be given illustrated answers to Entrance and Public School Leaving questions in drawing, by Mr. A. C. Casselman.

The following histories are reconmended as works of reference for the teacher :
In English History:
Green's Short History of the English People.
Constitutional Monarchy. (Bright's History of England.)
In Cancodian History:
Withrow's History of Canada.
Parkman's "Pioneers of New France."
" "Old Régime in Canada."
" "Wolfe and Montcalm."

## CORPORAL PUNISHMENT.

" Do you know of schools where corporal punishment has been abolished? Is the standard of discipline better or worse than before? How does the moral tone of the schools compare with those in which corporal punishment may be inflicted ?"

Yes, we know of schools where corporal punishment is the ordinary penalty inflicted upon the children, others where it is never used, and still others where it is applied under certain conditions. Although we would prefer to say that the second state of affairs is the best, yet experience has seemed to prove that there are some case; in which the application of corporal punishment results favorably, or at least prevents the infliction of a penalty which is much more harmful to the child. We have one such in mind where the complete abolition of corporal punishment was attempted. In the majority of the schools there was no difficulty in the discipline, the tendency was strong towards self-control and self-government, and the teachers were not compelled to resort to subterfuges or to invent penalties, which are really more dangerous than the prescribed punishment. But there were individual cases-pupils accustomed to be ruled at home with cuffs and blows who felt no respect for an authority which could not wield a rod as its symbol. These pupils said boldly, "What are you going to do with me? You cannot whip me, and I would just as soon be expelled as not." After mature deliberation, the Board of Education decided that corporal punishment in such cases was more wholesome and effective than suspension or expulsion, and the rule was modified to allow the principal to administer corporal punishment upon the request of the parent. The cases are very few, and the need grows out of the experience and environment of the children. We trust that by and by it will cease to exist.-From The Popular Educator.
"A hundred years ago," said Dr. Thompson, " the dependence was upon the infliction of bodily pain. It was a marking system, in which the marks were made on the boy. In teachers of a low moral type it developed a love of inflicting pain, from which the smallest and least resistent children always suffered the most. But it was not always, or even commonly, abused in this way. The best teachers, then, as Arnold, for instance, employed it in the last resort, and of eight schoolmasters in my experience only one abused his power in this way. When used with judgment, it had the great merit of bringing the pressure to bear on the worst boys in the class, and those only. The boy who did his work was fairly sure of exemption from rod and ruler. He took matters more easily than he can under the system which replaced rod and ruler. This method of enforcing work in school has fallen into disuse gradually, through the force of a hostile public opinion chiefly.

Formerly, the colleges and universities employed it equally with the schools. Milton was whipped when at Cambridge for some neglect of his duties as a student. In the University of Pennsylvania the rod was used until 1794, when its use was suspended, but never formally abolished.-From the School Journal.

## THE OLD PROBLEM.

"Can someone tell me how to break up whispering in the schoolroom? I cannot ste that it improves matters any to scold all the time."

One of The Many.
You are quite right. The remedy is not suited to overcome the disease; rather it introduces another evil into the schoolroom.

The first method which the teacher should employ to break up whispering is to provide interesting work suited to the capacity, of the children. This is the "ounce of prevention" which is "worth the pound of cure." If the work is interesting, the children will want to do it ; if the teacher definitely directs the pupils, they will understand what they are to do and how to do it, and so will not need to ask their neighbors. If the work is suited to their capacity, they will be able to do it, and so will be kept busy, instead of indifferently lapsing into their seats and filling their idle moments by consultations with their neighbors. If the teacher examines and praises the work which the children do at their desks, they will have an incentive to work which will keep them from idieness and its attendant whispering.

Another help is found in rightly directing the deal of the school. Lead the children to see that the purpose of the school is work; it is to their interest to do their best work, and in no other way can they grow to the strength and power which they desire. The best work is not possible without attention; attention is not possible when the student is frequently interrupted; whispering interrupts and disturbs, and so destroys the attention and prevents good work. Any boy or girl ought to be strong enough to keep from doing that which be or she knows hinders his growth. The children should make a compact with one another to try to keep from whispering.

Such methods ought to succeed; in many schoolrooms they do succeed. You may need to talk individually with a few pupils in order to secure their co-operation, but your success ought to be assured.-From The Popular Educator.

## WHO IS TO BLAME?

In a recent number of The School Journal there was an article regarding "Isolation of Teachers," and, after reading it, 1 asked myself this question : Who is to blame ?

It is true that a great many teachers are isolated, especially in the country districts, but in the great majority of cases they themselves are to blame. Teachers, as a rule, are too exclusive. They withdraw themselves from those very associations which would tend to bring them in contact with the living, mozing world, and give them that active inspiration which is of such inestimable value to the true teacher.

And when it is said that teachers are exclusive, it must not be supposed that their exclusiveness consists mertly in holding themselves aloof from the social life of their patrons.

If teachers were never remiss in any other way than this, it would be bad enough ; but there is another and deeper consideration. Many, too many, teachers neglect not only their social duties, but they are exclusive to the verge of selfishness, professionally. They care nothing for the methods employed by others, and they regard as preposterous the suggestion that they might be benefited by associating in a professional way with their fellow:teachers. Of course this cannot be said of all teachers, for there are many that are earnest in their work, and they honor the profession. But commissioners and superintendents know how difficult it is to instil into the minds of many teachers under their charge the thought that there is such a thing as professional duty in the business of teaching. Those very teachers who would be most benefited by coming into contact with other educators are, generally speaking, the ones who "despise teachers' meetings," "hate institutes," pronounce educational papers "dry," etc.

It is a common circumstance to hear teachers say, "I'd never attend an institute if I didn't have to, for I never learned anything yet at an institute." They seem to prefer to isolate themselves from the sympathy of their contemporaries.

They do not win any respect for the profession they are following, for the reason that they are not in touch with the leading minds in the profession; they are professionally exclusive, and in their isolation they declare that teaching deprives them of social opportunities.

Small boys often ask their parents: "How deep is the sea?" The answer depends entirely upon the sea. The following table, compiled by one who has investigated, may help one to the solution of one of the small boy's problems. Average depth in yards: Pacific, 4,252; Atlantic, 4,026; Indian, 3,658; Antarctic, 3,000; Arctic, 1,690; Mediterranean, 1,476 ; Irish,240; English Channel, 110 ; Adriatic, 45 ; Baltic, 43.-Round Table.

The teacher who stops growing begins to lose teaching power. There are many petty annoyances which assail every teacher, and usually some one or more serious drawbacks to one's intellectual vitality. All these can be more than counterbalanced by the inspiriting effects of new intellectual activity. If that is wanting, the friction becomes galling, the pleasure of daily work is impaired, the teacher loses cheerfulness and energy, and the old measure of success is wanting.--From the Pennsyliania School Journal.

## HOW JIM GAINED A PRIZE.

## (Concluded.)

Jim studied faithfully for three weeks, and so did Lee Raymond. The latter was the only boy who Jim feared would surpass him on the examination. Every evening as he tramped bomewards he had to pass the Raymond house, and he would see Lee, sitiing by the sitting-room window, working away on the history. The boys never spoke, but Lee would let his lips widen in a superior sort of smile that decidedly irritated the other lad.

The night before the momentous examination, Mr. Bixby leaned over his son's shoulder, as the latter was trying to fix in his mind the fact that Busiris was said to have built the city of Thebes.
" Jim," he said, " you better come out 'head on the examination, sonny. Raymond was talking in the village this morning, boasting about his boy and his boy's smartness. He hinted that Lee would win the history prize. You recollect what's at stake for you, and beat him."
"Ill do the best I can, pa." Pour Jim was almost tired repeating tinat phrase of late.
""Jim, it's twenty mınutes past seven," said Mrs. "Dixby next morning, glancing at the clock. of the weather?"
"Land, ma!" laughed Jim, nervously ; "presume I could walk four miles in an hour and a half, if the snow was up to my neck."
But in a few minutes he put on his coat and cap, and took the precious history to study on the way, and, despite his usually undemonstrative ways, returned the hearty k.ss his mother gave him.
The minutes wore away until it was ha'f-past ten
"Guess Jim must be 'bout half through his ques-
tions by now," thought Mrs. Bixby. At the same moment the kitchen door opened, and Jim, whitefaced and red-eyed, entered.
"Oh, Jim, what is it?" cried the woman.
"I was late, ma," said Jim, slowly. "It was five minutes past nine when I got to the class-room."
"Surely you didn't loiter by the way?"
"It took me from half-past seven till half-past nine to get to the schoolroom." answered Jim, constrainedly.
"But what kept you?"
"Don't ask me anything, ma. You don't know how bad I feel."
"You're holding something back, Jim."
"Yes'm. But I got to do it. Oh, ma, its awful hard, when I want to go to college so bad."

All her mother's heart went out to comfort him.
"Never mind, Jim; you can try again next year. Your pa'll be mad; but you trust to me and keep up your spirits."
She comforted him as well as she could, but they both knew that there was now little hope of a
college education for Jim. The boy's father was a man who always kept his word.
Great was Mr. B'xby's wrath when ne learned that Jim had been late to the examination, and overwhelming was the torrent of reproaches cast upon the luckless boy. But Jim had pluck. He bore up bravely and said nothing.
Secretly, Mr. Bixby was grudgingly proud of his son, and he had counted on the boy's gaining that prize. It was a bitter disappointment to him to know that he had not even tried, and the bitterness was not lessened when he learned a da'y or two later that Lee had been adjudged winner.

For the next two or three weeks Jim had a hard time of it. Mr. Bixby took him out of school, saying that it was not worth for him to finish the session, since he was not going to college. The boy had more tasks than ever to perform. Every time Mr. Bixby assigned a piece of work to be done, he would say
"And hurry up about it, sonny. Remember what delay cost you a little ago. I want no more fooling."
Jim began to expect some such remark every time he saw his father. His mother was his standby in this time of trouble, and the two grew nearer to each other just on account of these little troubles.

One night Mr. Bixby came home late for supper, an unusual thing for him. He walked into the dining-room where Jim was listlessly trying to eat, and, pushing the boy out of his chair, literally hugged him.
"What an awful goose you were, sonny," he cried; " not to trust your own pa. Ma, you take a bank check, and this here boy and you go into the city to-morrow, and get him the nicest lot of tip-top clothes that a boy would want for college. Do it to-morrow, while I have the money. Mebbe in September I won't have so much. You have him get his hair cut at a first-rate barber's, and buy him a new trunk. Jim, you start back to school to-morrow. Why didn't you tell your ma, anyhow?"
"I thought you would be mad," said happy Jim. "I guess you better try to get 'quainted with your pa some. I may be stern, but I hope I'm just. To think I came near never finding out. Raymond has tried to speak to me for several days, but I always walked off. To-day, he and Lee both tackled me, and I had to listen."
"If one of you would explain," said Mrs. Bixby, helplessly.
"Let Jim tell," said his father, looking beamingly at the boy.
"Why, you see, ma," explained Jim, "I was passing Raymond's that morning, and I saw Mrs. Raymond standing on the steps, waving her hands distracted-like. She called me, and I didn't like not to come, so I hurried up. Little Alice was lying in the sitting-room unconscious, and couldn't be brought to. Mr. Raymond had gone to town. Lee had started for the school, and there wasn't a soul on the farm. Mrs. Raymond was scared to death. She wanted the doctor, and couldn't leave Alice to go for him, so she asked me to get him. Even if he lives at the other end of the village from where the school is, I thought I'd get back to the examination in time if I hurried all I could. I ran's much as I was able, but when I came to the doctor's he wasn't there. He was out to the Blake's farm, a good half-mile away. So I went there, and he drove me back to school, only I was five minutes late."
"And then the doctor drove him to Raymond's," finished Mr. Bixby; "and he pitched right in and did chores, and minded the baby for Mrs. Raymond while she and the doctor were tending to Alice. Doctor said if he hadn't been called then Alice would have likely died.
Mrs. Bixby's arms were about her son's neck.
"I pretty near didn't get the doctor, ma, when I knew I'd have to go to Blake's for him," Jim said ; "because I knew then I'd be late. But I kind of thought it would be winning another sort of prize if I did my duty. So I did it ; only it was hard."
"Yes, sir. You've got a bigger prize than the history one now," said his father. "And, ma, I guess you and 1 have a prize, too ; that's what Raymond told me. Say, sonny, you run up to the attic, and get some nuts, and popcorn, and sweet apples. And, ma, I wish you'd put on your best dress, for Raymond and his wife and Lee are coming over to-night ; and we'll all have a visit together like we used to in old times."-The Independent.

## Sinatbematics.

Communications intended for this department should be Writion on one side only, and with great distinctness ; they
should give all questions in full, and refer definitely to the books should give all questions in full, and refer definitely to the books
or other sources of the problems, and they should be addressed or other sources of the problems, and they should be addressed to the Editor, C. Clarkson, B.A., Seaforth, Ont

## QUANTITY AND NUMBER.

## by professor hen musa.

Quantity is commonly understood to mean whatever can be increased, diminished, or measured. It is the answer to the question, "How much ?" and denotes so much; not more, and not less. Certainly there are a few things of which we cannot be sard to know the whole, the totality; such are space, and duration, and force. We know them in part only, and are somewhat uncertain whether we should describe their totalities as the sum oi endlessly increased additions of definite and conceivable parts, or simply in a lump, as infinite quantities. These have no place in elementary teaching, and for the present we may properly confine our attendion to definite magnitudes waich admit of measurable increase or diminution, such as common weights, values, and distances, usually described as finite or limited quantities.
In this case we select a known, definite, clearly conceived magnitude as the standard of reference, commonly called the unit of comparison. This is the ONE by which we measure the given quantity in order to attain a definite answer to the quession, "How much?" when the totality exceeds or falls short of the amount we can grasp by simple apprehension or intuition. The magnitude of this unit, this one, is itself variable, according to convenience, and in proportion to our power of intuition, which is different at different stages of mental development. For example, any child can know the length of a yard by simple observation and intuition, without the intervention of comparison and reasoning ; but the intuition of a mile or league requires more extended experience and habitual comparison. Any child can intuit two, or three, or five separate objects by simply looking at them and without consciously counting, but very few can apprebend precisely a dozen or a score without the discursive process of comparison and judgment, commonly called reasoning. The power grows by cultivation and practice, so that some shepherds can accurately distinguish at a glance shepherds can accurately distinguish at a glance
between 49 sheep and 50 sheep in a flock, some sailors between 9 miles of water and Io miles; and some astronomers may, perhaps, attain to an intuition of a milion miles, and some geologists to that of a thousand years. The one, the unit, is relative to mental power, and is always decomposable into smaller units or ones, as convenience of measurement and mental power of intuition may require. Whether the measurement of a given quantity or magnitude is to be effected by intuition or by reasoning is a matter of individual power and convenience. A Patagonian savage cannot count much over 20 ; a modern astronomer can take the diameter of the earth's orbit for his unit of measurement. It should be one distinct purpose of Public and High School training in arithmetic to develop the power of intuiting large units as one valuable result of the study.

Having, then, fixed the known and properly cognized unit, we have a measurin 5 rod by which toanswerthe question, "How much?" Thisquestion is answered by asking another, viz, "How many times?" The answer is the genesis of our conception of number. How many times is the fixed unit contained in the quantity or magnitude to be considered? The answer may be in three or four forms, and our conception of number is accordingly muitifold.
First of all, the given quantity may contain our ONE precisely, an exact number of times, without excess or defect. We can then express the magnitude (the how-muchness) of the given quantity by using two parts in the expression. The second part tells what intuitive measure or unit has been selected for comparison ; the first part of the expression tells how often this standard unit must be repeated so that the total sum may exactly equai the quantity measured. Thus, six miles, eight pounds, twelve men, mean one mile repeated six times, one pound repeated eight times, one man repeated twelve times, and the totality or sum is the
quantity to be apprehended. We call the first
part of the expression a whole number, or an integer. There is nothing of excess, nothing of defect, in the measurement. Sixty-three gallons exactly fill the barrel ; twenty shillings precisely make the sovereign; sixteen ounces exactly counterpoise the pound.
Secondly, the given magnitude may not contain our ONE precisely an exact number of times, and there may be some excess or defect in the measurement. In this case we have several ways of expressing the magnitude of the quantity to be considered. One way is to measure the quantity by the fixed unit, or one, as nearly as may be done by successive repetitions, whereupon we find an excess or defect left unmeasured. To estimate this we subdivide the fixed unit into a precise number of smaller units, as one gallon into four quarts, one shilling into twelve pence, one pound into sixteen ounces, etc. Then we measure the excess or defect with the smaller unit, and find it equal to so many quarts, peace, ounces, etc. If the smaller unit measures the former excess or defect precisely, we have an exact expression for the given quantity. But if not, there is a second excess or defect, and we proceed to treat this in a similar manner; that is, we subdivide the unit quart into an exact number of pints, the penny into an exact number of farthings, the ounce into a precise number of grains, etc. In the end we arrive at complete expressions in terms of the assumed units, such as, 3I gallons, 2 quarts, $I$ pint ; 6 shillings, ro pence, 2 farthings ; 5 pounds, 3 ounces, 117 grains, etc. But if all our units are exbausted, and there is still some excess or defect unmeasured, we bave recourse to more complex methods of approximation, which belong to the higher parts of arithmetic, algebra, and geomery.
The simplest method is to symbolize the operation without actually performing the measurement exactly. This expression is commonly called a fraction. One number is taken to represent the quantity to be measured, and the other to represent the measuring unit, and we place these symbols in a certain position to indicate the number of times the first contains the second without deciding precisely the exact number of times. We are satisfied with a somewhat less definite expression, and are content to say, "So many times, whatever that may be." This method of symbolizing the operation instead of performing it is a very valuabie artifice, and may be used, if need be, both when the assumed unit will exactly measure the given quantity, i.e., in the case of exact integers, and also when the assumed unit will not exactly measure the given magnitude under consideration, i.e., in the case of a common fraction, and in the case of an incommensurable quantity, and in the case of a so-called imaginary quantity. Thus, in common arithmetic, we find it extremely convenient to indicate such uivisions without seeking for a more positive and definite expression of the number of times the unit magnitude is contained in the quantity to be measured. We can thereby very often abridge our work by one-half, and perhaps by very much more. In generalized arithmetic, or common algebra, we rarely attempt to define explicitly the precise number of times intended. When a child is sufficiently mature to deal with these symbolized numbers understandingly, he has already proceeded a long way on the path of abstration and generalization, and has fully entered on the second stage of instruction in mathematics. But he should not be hurried through the first stage of pure arithmetic, viz., that in which integers alone are dealt with, until he has a sufficient grasp of whole numbers, and can perform the four fundamental operations with great ease and accuracy. Impatience here, as everywhere, bears bitter fruit; and the records of our examinations prove that the failure in the foundations leads to failure farther up the course. The teacher should have a clear conception of the fundamental notion of number and of the elementary modes of representing it to the eye and to the ear, and should have a well-assorted group of illustrative examples to bring out the abstract idea from concrete cases. Muddled and confused conceptions in the teacher's mind will be reproduced with exaggerations in the pupil's mind. For example, he will think that the figures $1,2,3$, etc., are numbers, and not merely signs or marks, or names to represent the thoughts that we call numbers. For example, he will think that $4 \times 5$ is identical with $5 \times 4$, instead of being merely equiva. lent. For example, he will imagine that in the
case of 6 horses or 6 dollars the number six is in some way entirely a different thing from another 6 , as in the case of 6 times seven, and will not appreciate the fact that both these sixes express an abstraction, a pure thought, a judgment, a comparison of the mind with regard to certain quantities. Of the three or four steps in the conception of number in its widest, largest sense, the first is sufficient to occupy the attention of a child to the end of the Junior Third class.
Let us conclude by noticing some contrasts between number and magnitude.
(a) Many kinds of magnitude are revealed to us by the senses, as weight, length, motion. All numbers are super-sensuous; they are not extended or colored, they bave no weight or shape, they produce no effect of sound or touch, they cannot be touched, or seen, or heard, or pushed, or tasted. Some magnitudes are also abstract, as time, force, and space. All numbers are abstract conceptions apprehended by reason and revealed to intellect upon the presentation of something capable of increase or decrease.
(b) Common magnitudes or quantities are things conceived as having separate and independent existence. Numbers are conceptions of relations between things with regard to comparative bulk, extent, etc., just as prepositions in ordinary language describe, not independent thoughts, but only the relations between other independent thoughts.
(c) Magnitude can be thought of separately and independently of the notion of number. Number is essentially a relative notion, and always refers to some quantity or magnitude expressed or understood, even in the highest abstractions of symbolical mathematics. Pure, unrelated number is as unthinkable as "a stick with only one end."
(d) Quantity is continuous in most cases; it is concrete, flowing on, as it were, without break or separation; it grows from less to more. "Number is essentially discrete, discontinuous, proceeding from one value to the next by a finite increment or jump," and so cañ only express imperfectly the measure of continuous magnitude. This imperfection of number is the source of many apparent contradictions and difficulties in mathematics.
C. C.

## CORRESPONDENCE.

J.D. asks for " a rule for finding the volume and surface of a globular body in the shape of an ellipse." See Pub. Sch. Arith., p. 19o, XI.
"Also, when a flat figure is elliptical in shape, how are the surface and the circumference found ?" See Pub. Sch. Arith., p. I89, VII. If $R$ and $R_{1}$ be the longer and the shorter semi-axes of an ellipse, the circumference will be nearly $=2 \pi R$ $\sqrt{2}\left(R^{2}+R_{j}^{2}\right)$. For all practical purposes it will be near enough to take one-half the sum of the circumscribing circle and the inscribing circle.
Young Teacher asks for solutions of Nos. 19, 20, 23, 24, and 25, page 171, Pub. Sch. Arith. Some of these have been solved before. Perhaps some kind friend will assist here.
S. G. McG. If the two pegs are 6 feet apart, and the length of the rope i6 feet, with which you describe the ellipse, you can get the area of the flower-bed as follows: Bisect the distance between the stakes by a line at right angles; stretch the rope until the apex is on this perpendicular. It is plain that the length from the apex of the rope to the middle point is $\sqrt{55}=$ minor semi-axis. The major semi-axis must be $3+5=8$. Hence area $=\frac{22}{T^{2}} \times 8 \times \sqrt{55}$.
I.W.P. sent neat solutions and diagrams for problems $14,15,16,17$, 18 . We regret that they came too late for use in our last issue. He finds the answer to No. I4 to be 110.8742 feet in a N.N.E. direction. The answer given by the proposer, A.H.P.M., was $60(2+\sqrt{2})=110.863$. Thus: $\mathrm{R}^{2}=\mathrm{P}^{2}+\mathrm{Q}^{2}+2 \mathrm{PQ} \cos \mathrm{a}=60^{2}+60^{2}+2 \times 60^{2} \times \frac{1}{\sqrt{2}}$ or $(\text { resultant })^{2}=60^{2}(2+\sqrt{2})$.
S.J.C., Hamilton. Ten problems received from this address.
R.G., Burk's Falls. Five problems received. These, and some fifty other problems, will receive attention at the earliest opportunity. Meanwhile,
will our correspondents try to possess their souls will our correspondents try to possess their souls
in long-suffering forbearance? Our space is soon exhausted.

## THE HIGH SCHOOL PRIMARY, 1895

arithmetic and mensuration.
I. (a) Find, to the nearest cent, the value of $\$ 100 \times(\mathrm{I} .03)^{8}$.
(b) Find, within one inch, the side of a square whose area is 5 acres.
2. (a) Find, by contracted methods, the value of $(1.23456)^{3} \div(.23456)$, to the fourth decimal place.
(b) Prove that an integer is divisible by 3 if the sum of its digits is divisible by 3 .
3. In what proportion must two kinds of tea, which cost 50 cents and 65 cents per lb . respectively, be mixed, so that when sold at 60 cents per lb. there may be a gain of $I_{0}^{1} \%$ ?
4. The discount on a note for $\$ 3.650$, which matured on Auzust 2Ist, and was discounted on June 24th, was $\$ 40.60$. Find the rate of discount.
5. What sum of money deposited in a bank at the end of each year for the next 3 years will amount to the same sum as $\$ 5,000$ deposited now, banks paying $4 \%$ per annum, interest added yearly?
6. What must be the market value of $6 \%$ stock, so that after paying an income tax of 16 mills on the dollar it may yield $5 \%$ on the investment?
7. State the relation between the pound troy and the pound avoirdupois. What is the gain per cent. when the selling price per oz. avoirdupois is the same as the cost per oz. troy?
8. The diameter of a circular plate of lead is 13 inches. From this is cut out a circular plate of radius 6 inches, and the remainder of the lead is moulded into the form of a circular plate, with one-fourth of the fo.mer thickness. Find the diameter of this plate.
9. A rectangular field whose length is $\frac{4}{3}$ of its width contains 2 ac., 112 sq. rds. Find the length of a diagonal.
1o. The length of one diagonal of a rhombus is double that of the other ; the area is 16 sq . in. Find the length of each side.

## SOLUTIONS.

I. $($ a $)(1.03)^{8}=\left(1+\frac{3}{10 \pi}\right)^{8}$

$$
\begin{aligned}
& =1+8\left(\frac{3}{10} \overline{0}\right)+28\left(\frac{3}{100}\right)^{2}+56\left(\frac{3}{10}\right)^{3}+ \\
& 70(130)^{4} \\
& =1+.24+.0252+.001512+\mathrm{etc} . \\
& =1.266712
\end{aligned}
$$

$\therefore 100 \times(1.03)^{x}=\$ 126.68$ to the nearest cent.
(b) Side $=\sqrt{5}$ acres $=\sqrt{(5} \times 4840 \times 9 \times$ 144) inches

$$
\begin{aligned}
& =\sqrt{(5} \times 121 \times 4 \times 10 \times 9 \times 144) \\
& =\sqrt{\left(5^{2}+11^{2} \times 2^{2} \times 2 \times 3^{2} \times 12^{2}\right)} \\
& =5.11 .23 .12 . \sqrt{2}=3960 \times 1.4142 \\
& =5600.232 \text { inches. }
\end{aligned}
$$

2. $($ a $)(1.23456)^{3}=(1.23456)^{2} \times 1.23456$, to be divided by 23456.

Operation-

| .000123456 |
| ---: |
| 654321 |
| 123456 |
| 24691 |
| 3703 |
| 494 |
| 62 |
| 7 |
| 1.52413 |
| .0000152413 |
| 654321 |
| 152413 |
| 30482 |
| 4572 |
| 609 |
| 76 |
| 9 |
| 1.88161 |

Notes.--Make the multiplier a whole number. Carry out the result to five places. For 15 in the first figure, carry 1 the first time and 2 the second time.

## 23456)188161(8.0219 513 44 21

Notes.-Make the divisor a whole number. Combine multiplication and subtraction in the operation.
See " Girdlestone's Arithmetic" for full explanations of this method, which abolishes all doubt in regard to the decimal point.
(b) Book-work. See H. Smith's Arithmetic, p. 34 ; High School Algebra, Part II., p. 124, etc. The arithmetical proof can only be made by particular examples, thus
$12345=10000+2000+300+40+5$
$\therefore 1335=10000+2000+300+40+5$

$$
\begin{aligned}
& =33333+066^{2}+2993+12 \frac{1}{3}+5 \\
& =(3333+666+299+12)+\frac{1+2+3+4+5}{3}
\end{aligned}
$$

And so for $a n y$ number abcde divided by 3 there will be a quotient, say $Q+a+b+c+d+e$,
the remainder will be the same as the remainder obtained by dividing the sum of the digits by 3 . The fundamental fact is seen from these examples :
$\frac{10}{3}=3+\frac{1}{3}, \therefore \frac{10 x}{3}=x\left(3+\frac{1}{3}\right)=3 x+\frac{x}{3}$
$1000=33+\frac{1}{3}, \therefore \frac{100 y}{3}=y\left(33+\frac{1}{3}=33 y+\frac{y}{3}\right.$, etc.
$\therefore$ rooow $+100 y+10 x-m=333 w+33 y+3 x+$ $w+y+x+m$

## 3

3. $11 \frac{1}{3} \%=\frac{1}{9} ; \quad \therefore 60 \mathrm{c}=10$ cost ; cost price $=54 \mathrm{c} .54 \mathrm{c} .-50 \mathrm{c} .=4 \mathrm{c}$. loss $; 65 \mathrm{c} .-54 \mathrm{c} .=\mathrm{IIC}$. loss. The loss and the gain must be equal to give the average price.

Take in lbs. © 50c., and the loss is $44 \mathrm{c} . ; 4 \mathrm{lbs}$. (ci) 65 c ., and the gain is 44 c .
$\therefore$ the proportion is $11: 4$.
4. The words "which matured" are decidedly ambiguous. We interpret them to mean that the note was made payable on August 18th, and that 3 days' grace are included. But most bankers would understand that the note was payable August 2Ist, and would add the 3 days up to August 24 th, when the note could be protested.
June 24 th to Aug. 2 Ist $=58$ days, for which bank discount on $\$ 3,650=\$ 40.60=$ interest for $\frac{54}{365}$ of a year.

Int. on $\$ \mathrm{I}=\frac{40.60}{3650} ;$ int. on $\$ 100=\frac{4060}{3650}$ for 3.585 of a year.

Int. on $\$ 100$ for I year $=4060 \times \frac{365}{38}=7$. Ans. $7 \%$. 5. Let $\mathrm{S}=$ sum deposited © $4 \%$ compound interest.
$S\left(1.04^{2}+1.04+1\right)=5000 \times 1.04^{3}$
i.e., $S(1.0816+1.04+1)=5000 \times 1.12486$
$\therefore S \times 3.1216=5000 \times 1.12486=5624.3$
$S=5624.3 \div 3.1216=\$ 1801.745$.
6. Cross income $=\$ 6$ per share ; 16 mills $=\frac{10}{1060}$; Remainder $=\frac{98}{90} 10$
$\therefore$ net income $=6 \times \frac{9 \% 4}{1000}=\$ 5.904=5 \%$ on cost
cost $=5.904 \times 20$
$=\$ 118.08$.
7. (a) i lb. avoir. : i lb. troy $=7,000 \mathrm{grs}$. : 5,760 grs.
$\begin{aligned} & =175: 144 . \\ \text { (b) } 1 \text { oz. avoir. : i oz. troy } & =\frac{1}{16} \text { of } 7,000: \frac{1}{1-2}\end{aligned}$ of 5,760

$$
=437!480
$$

Gain on $437 \frac{1}{2}=42 \frac{1}{2}$; gain on $100=\frac{2500}{85}=9 \%$.
8. The areas of the plates are proportional to the squares of their diameters, supposing the thickness to remain the same.

Thus, ist plate: 2nd plate $=13^{2}: 12^{2}=169: 144$
$\therefore$ ist plate: 3rd plate $=169: 25=13^{2}: 5^{2}$
$\therefore$ the diameters of the ist and 3 rd are 13 inches and 5 inches, when of the same thickness. Now, when the third plate is made $\frac{1}{4}$ this thickness, it will have four times the area, $\therefore \mathrm{A}: 4 \mathrm{~A}=5^{2}: \mathrm{x}^{2}$, when $\mathrm{x}=$ new diameter.
$\therefore \mathrm{x}=10$ inches.
9. Area $=432$ sq. rods $=12$ sq. units, viz., $4 \times 3$.

I linear unit $=6$ rods $;$ diagonal $=5$ units $=30$ rods.

1o. The diagonals are at right angles. Let $2 x$ be the shorter and $4 x$ the longer, $\therefore$ area $\frac{1}{2}(x 4 x)$ $+\frac{1}{2}(.46 x)=4 x^{2}=16 ; 2 x=4$ inches, $4 x=8$. Hence, in any one of the four right-angled triangles the perp. $=2$, base $=4, \therefore$ hyp., i.e., side of rhombus $=2 \sqrt{5}$
$=2 \times 2.236=4.472$ inches.
"'Twould be endless to tell you the things that he knew,
All separate facts, undeniably true,
But with him or each other they'd nothing to do,
No power of combining, arranging, discerning,
Digested the masses he'd learned into learning."
-James Russell Lowell.

## Correspondence

## THOSE PHILOLOGICAL QUESTIONS.

## To the Editor of The Educational Journal;

SIR,-Will you kindly allow me to correct two errors in the printing of my letter in The Educational Journal of March 2nd, and to add a few remarks? "There are, on page 39, fifty errors" should read, "There are, on pages 39,50 , errors ;" and "to parse fairly complete" should read "to parse fairly completely.'

Now that your reviewer has given specific instances of what he considers to be my errors in the consideration of vowel-changes, I may defend my position with the prefaced remark, that to characterize a statement as "flat nonsense" is apart from the spirit of criticism. Anyone who will spend five minutes upon the careful utterance of the vowel-sounds will come to the conclusion that there is what I may call a tone-arch from the throat to the lips, consisting of the sounds of $i$ (as in pick), $e, a, o, u$. It will also be found that when, for instance, by the addition of a feminine or plural suffix, this order is violated, there is a tendency to return to it. The motive of the tendency is desire for ease of utterance. Why, then, call the statement: "There appears to be a constant struggle to return to what may be called the natural order of vowels" "flat nonsense"? I do not call this tendency umlaut. Umlaut is a theory to explain the fact of this tendency, and if in my book I have only given instances of umlaut, without stating the meaning of the term as Grimm invented and applied it, I did so for the sake of simplicity only, and with no eye to the reviewer. My obvious notion was to do something for the schoolboy, and not to compete with Skeat, Sweet, or Sievers.

The words they and them are partly derived from the A.-S. tha', thaem, and partly from the Scandinavian. No one denies their connection with Anglo-Saxon.

Though by-law is now generally explained as a subordinate or secondary law," the elements of it are $b y$, a town and law (Dan bylou, municipal law). Therefore, $b y$ in $b y$-laze, and by in Whitby are the same.
I think, sir, that I must be very dense, as I can. not see what your reviewer is running his head against in my account of its.

Concerning the name " mixed. verb," I find its use, every day, better and better calculated to avoid confusion. That the past tense of such verbs as "teach," "sell," was not formed by ablaut does not alter the fact that it was formed by vowel change. A great English teacher used to call such verbs mixed verbs, even in Anglo-Saxon, and now, when there is no longer any need to consider the question of what the vowel-change is due to, $I$ think the advantage of the use of this term in teaching to be very considerable.
Now that your reviewer has revoked his intention of not considering seriously the statement that "the before a comparative may be regarded as a conjunction," I will explain myself. The sentence : " The more, the merrier," is, like many sentences containing comparative clauses, elliptical. Completed it runs: "The more we are, the merrier we shall be," and I contend that the before more does connect the two parts of the sentence, and is a subordinating comparative conjunction. I have given in my book the origin of the, but I have yet to learn that when we give the origin of a word we state what part of speech it is,
I thank you, sir, and indirectly your reviewer, for allowing me to give publicity to a few not uninteresting points in the every-day study of our language. Yours faithfully,

> A. Allen Brockington.
B.C.S., Lennoxville, March 2 Ist, 1896.
[Those of our readers who are interested in the facts will find abundant confirmation of our views in the authorities referred to in our last reply. We are very glad to allow Mr. Brockington the last word.]

And this our life, exempt from public haunts, Finds tongues in trees, books in the running brooks,
Sermons in stones, and good in everything.
-Shakespeare: "As You Like It."

# 『rimary ©epartment. 

MORNING HYMN.
The morning bright with rosy light
Has waked me from my sleep;
Father, I own, Thy love alone Thy little child doth keep.
All through the day, I humbly pray Be Thou my guard and guide;
My sins forgive and let me live, Dear Jesus, near Thy side.

Oh, make Thy rest within my breast, Great Spirit of all grace;
Make me like Thee, then I shall be Prepared to see Thy face.

## COMMON-SENSE HYGIENE.

е. р. к.

CARE OF THE TEETH.
Little children care less, that is, they show less interest in the appearance of their teeth than that of any other part of their face. They ignore their good or bad condition about as thoroughly as they do that of their hands, and one could hardly find a more expressive parallel.

Parents, too, are singularly careless and indifferent as to the welfare of the teeth of their little ones up to the time that they begin school. After the troublesome things are once well "through" in the "teething" process, nature is trusted to take care of the rest.

But nature plays all sorts of freaks with the temporary set of the little folks, crowding them here, there, and everywhere in a most untrustworthy manner, and the unsightly mouths in our primary rooms is the result.
Is it not the first thing to do to create an ideal of beauty and cleanliness of the teeth in the minds of the children? It will need wisdom to do this well; for it is usually new ground for cultivation. A word here and there as to the beauty of nice teeth - the " niceness" meaning cleanliness, as a rule, for symmetry isn't always possible-will begin to "tell" on the imagination of the little ones. If they can fall in love with the sound of "little pearls," it will help matters wonderfully.

Right here, it is best to teach enough anatomy of the teeth to show the harm of using them for nut-cracking-an accomplishment of which the boys especially are always very proud. Children can understand the word enamel as well as they can vertical or horizontal; then enter upon the hygiene of the teeth with a quiet determination to set that whole school to teeth-brushing.

The toothpick is not to be ignored, either, as a sanitary instrument, but above all things do not neglect to impress them with the conviction that there is only one place in the world where the use of a toothpick is permissible, and that is in the same environment in which a toothbrush is in place-in the privacy of one's toilet. It may be a departure from the subject of hygiene, but if our little children could be taught to look upon toothpicks upon the dining-table as unpardonable, it would be so much added to their ethical cultivation.

The introduction of the tooth-brush in the series of talks on the teeth will be met with a blank look by the children, and the general admission that they "haven't got any." What is to be done? If the previous talks have been a success, these children are ready to look upon the brush as the special need of their lives. If the parents refuse to supply it, the time has come to arouse their ambition to earn one for themselves. Work up a little ambition as to who succeeds in getting one first, and encourage the winner to tell how it was done.
Then will come the directions for their use; to brush up and down, and not across, and to use only tepid water for the mouth; and to repeat this process three times a day, which will be an appalling prospect to some of them.
Don't expect much help from the parents in this matter. You may get a sharp note from some besieged mamma who has never practically regarded the brush as a means of grace ; but don't mind that. Keep right on. You are training little men and women in a most important matter, and the next generation as well as this will get the benefit of it.-Primary Educator.

## SEAT - WORK FOR PRIMARY PUPILS.

Let pupils copy the following sentences, filling blanks correctly:

$$
\begin{aligned}
& \text { 1. A bird has wings. } \\
& \text { 2. Two birds have wings. } \\
& \text { 3. A boy has ears. } \\
& \text { 4. Three boys have- ears. } \\
& \text { 5. A cat has - legs. } \\
& \text { 6. A wagon has }- \text { wheels. } \\
& \text { 7. Two wagons have - wheels. } \\
& \text { 8. A bee has }- \text { wings. } \\
& \text { 9. Two bees have wings. } \\
& \text { 10. A fly has wings. } \\
& \text { II. Three flies have - wings. } \\
& \text { 12. A cow has horns. } \\
& \text { 13. Three cows have - horns. } \\
& \text { 14. A horse has legs. } \\
& \text { 15. Two horses have - legs. } \\
&
\end{aligned}
$$

## SUGGESTIONS.

It is not necessary to live or teach in a country district to have, as a part of the school work, "Nature Study." There are beautiful skies, gentle rains, budding trees and returning birds in the town, as well as the country. "No time," you say. If it is in your heart to increase the reverence and appreciation of your children for the works of nature, and to open their eyes to the beauties of spring, time will be found.

Consider, for a moment, the numberless ways in which you may utilize the interest in the season. How many illustrations for the geography lesson may be found. How many subjects for morning talks, reading lessons, language and busywork. The bright, cheery spring songs are an inspiration we would not be without.

There is always more or less lassitude and dullness in the springtime. The children seem tired and discontented. We must not be impatient with them, but try to overcome it by longer recreation periods, frequent change of work, and an increased interest in outdoor things.

I would again suggest the keeping of a spring record which will give the dates for the coming of the birds, the order of appearance of wild flowers, leaves, dandelions, length of time required for growth of seeds planted in the schoolroom, first thunderstorm, etc., etc.
"A gush of bird song, a patter of dew, A cloud and a rainbow's warning,
Suddenly, sunshine and perfect blue,
An April day in the morning."

## A HAPPY DISMISSAL.

In arranging a programme, it is well to reserve the last eight or ten minutes of the day for a parting talk, a story, a hymn, or some'such exercise that will, if a right spirit prevails, blot out the many little troubles and vexations of the day that were better forgotten than cherished. The day's work should have a fitting close, and at this time the teacher may get very near to the hearts of her children, if she will. When books and slates are put away, and everything is in order, I have always enjoyed a few minutes' quiet talk with my pupils, and have never considered it ill-spent time.

TALK WITH a PUPIL alone.
There is infinitely more good derived from a quiet talk with a pupil alone than from a reprimand given in the presence of the other pupils. This applies to every grade, not merely in dealing with the more advanced. When any serious misconduct occurs, have a conversation with the faulty one, and, as a rule, let him state his side of the case. Show him kindly and frankly wherein he is wrong, and let him know always that it is the wrongdoing and not the wrongdoer that you dislike. He will trust you after a talk of this kind. There would be fewer disciplinary troubles if this practice of private talks were followed.

## STAND NEAR YOUR CLASS.

Quite a* number of the modern schoolrooms have no platform. I have never heard an architect or managing committee state the reason for dispensing with the old-time requisite ; but while not disapproving of a proper use of a platform, I may say that I have found some advantages in its absence. In having classes at the board we have greater convenience. There is no stumbling off and on the elevated part, and we can arrange the class in any way we wish. The platform always seems to keep the teacher more at a distance from her pupils, and anything having that effect should be avoided. My recollection is that the teacher who had a platform sat a great deal on it, and supposed she saw everything that occurred in the class, which supposition was, of course, in error. The teacher who has no platform moves about more, shortens the distance between her pupils and herself, and, in consequence, holds the attention better and teaches more effectively.

## Question Drawer.

W.M.-We know no "cheap work" devoted exclusively to scansion. A good work on the subject is Abbott \& Seeley's "English Lessons for English People." X.Y.Z.-The certificates of the "Chautauquan Correspondence College" are not accepted by any university, and the degree from that institution will not admit one to the School of Pedagogy.
H.E.P.-There is no such thing as "the authorized history for use in schools of the United States." The Public Schools of the United States are not national. Education is under the control of the individual states, each of which has its own Public School system. As a rule, we believe, the text-books are not prescribed by the state, but chosen by the trustees or other local authorities

## JBook Mhotices.

Manual of Mythology. Greek and Roman, Norse and Old German, Hindu and Egyptian. By Alex. S Murray. Published by David McKay 23 South Ninth street, Philadelphia.
Murray's Manual of Mythology, containing a concise and clear account of the history and development of the Greek and Roman, Norse and Old German, Hindu and Egyptian mythology, is a work of interest and value to both teacher and student. It is not simply a teacher and student. It is not simply a gods, but deals in a yery pleasing manner with the interpretation of myths, showing the great truths of nature that were embodied in them. The influence of the old myths upon our own literature is also illustrated to some extent. The book is well printed on good paper, and contains many valuable and wellchosen engravings from photographs of antique works of art, which add greatly to the interest of the work.

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zines, on the terms given in the following table. Our arrangements are not far enough arivanced to enable us to name more than a few Canadian periodicals in this number, but we hope to have the table considerably extended in our next and following numbers. Of course, the advantage of this clubbing arrangement is available only to those who pay cash in advance. Immediately on receipt of the subscription-price named for any paper of the subscription-price named for any paper
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## Department

Jor the year 1896

April.
Returns by Clerks of counties, cities, etc., of population to Department, due. [P.S. Act, sec . 129.] (On or before 1st April.)
Applications for examnation for Specialists' certificates other that commercial to Department due. (On or before Ist April.)
Toronto University Examinations in Medicine begin. (Subject to appointment.)
2. High Schools close, second term. [H.S. Act, sec. 42.] (Thursday before Easter Sunday.)

Good Friday.
Easter Monday
Annual meeting of the Ontario Educational Association at Toronto. (During Easter zacation.)
13. High Schools open, third term. [H.S. Act, sec. 42.] (Second Monday after Easter Sunday.)

Public and Separate Schools in cities, towns, and incorporated villages open after Easter holidays. [P. S Act, sec. 173 (2); S. S. Act, sec. 79 2).] (Same as for H. S.)
15. Reports on IVight Schools due (session 1894-5). (Not later than the 15th April.)
Art School Examinations begin. (Subject to appointment.)
23. Toronto University Examinations in Law begin. (Sulject to appointment.)
N.B.--The Departmental Examination papers are not supplied by the Department, but can be obtained from the trade through Messrs. Rowsell \& Hutchison, Toronto.


[^0]:    "A PSALM OF life."

    1. Subject:-"Life is but an empty dream."-An unreal, dead, inactive thing.
    2. Argument:-Negative.

    Stanza 1, ll. 3, 4-General denial.
    " 2. Life a real, living, active thing.
    " 3. Object of life-activity, progressive.
    " 4. Life an activity. Why ?

