

jected, why should the other be retained? When there is but one kind of Interest, the prefix "Compound" is as much out of place as "Simple." Therefore Mr. Cameron, in requiring the solution of his problem to be given in "Simple Interest," is asking that the solution be rendered in an impossible form.

Mr. Cameron has also fallen into another error which I find to be common to very many; namely, that if a problem can be solved by elementary processes that the converse problem can be solved by elementary processes also. Thus because involution can be done by ordinary multiplication, they tacitly assume that evolution can be done by ordinary division.

Another error which Mr. Cameron has committed is common to him and all those who believe in the absurdity denominated "Annuities at Simple Interest." This mistake is, supposing that an approximation of a function can be used as a basis for an independent construction of another function of diverse form, instead of being applied after the second function has been established from the definitions.

You ask what suggestion would I make as to the mode of teaching Interest. The natural mode certainly seems to me to be to teach the truth that there is but one kind of Interest. Those rules now used under the cognomen of Simple Interest would then be removed from the false position they now occupy of an independent and co-ordinate branch of Arithmetic, to their proper sphere, which is that of being approximations only to the correct and accurate processes of Interest.

Who would think of putting forth Hutton's rule for approximating to the roots of numbers as a separate and independent species of evolution?

H. T. SCUDAMORE.

Sutherland's Corners,
14th May, 1873.

To Correspondents.—"Hygiene" being anonymous cannot be inserted until the name is furnished to the Editor.

INTEREST THAT IS INTERESTING.

To the Editor of the Journal of Education:

A lends B. \$1,000 payable in ten annual instalments of \$160 each; what rate per cent., simple interest, does B. pay?

Several solutions have been given to the foregoing question, all of which I believe to be fallacious. I suggest since this is a problem in *Simple Interest*, that it be worked on *Simple Interest* principles. At each payment B. pays a part of the principal and the simple interest on that part from the time it was borrowed.

\$160 = A = P(1+rt), in which the formula *r* is unknown; *t* varies from 1 to 10, and *P* also is variable; but $P = A / (1+rt) = 160 / (1+rt)$. By substituting the value of *t*, we have

$$\$1,000 = \left(\frac{160}{1+r} + \frac{160}{1+2r} + \frac{160}{1+3r} \&c. \dots + \frac{160}{1+10r} \right)$$

From this equation, we find by using the rule for approximation that $r = 12.316$ the rate, and in accordance with Sangster's Arithmetic.

WM. S. HOWELL,
Teacher,

S. S. No. 13, Sophiasburg, Ont.

It is time there should be an end to this subject. Now the true equated time for all the payments, and free from all the objections to the common rule for the equation of payment, is 5.2319+ years, and the rate at simple interest is 11.4681+. Any objections to this shall be answered by private correspondence. In the future numbers of the *Journal* will appear the solution of the questions proposed by me.

MATHEMATICAL EDITOR.
Address in future, A. Doyle, Ottawa, Ontario.

V. Biographical Sketches.

1. THE LATE SIR G. E. CARTIER.

(From the Globe.)

Sir George Cartier's career presents several remarkable phases of character well worthy of remark. Throughout his whole career we find him always distinguished as an enthusiastic supporter of the special claims of his French-Canadian countrymen. The love of his own race was, next to his personal ambition, probably the strongest characteristic of his career. He displayed it in the part which he took in the rebellion, and, afterwards in the desperate struggle which he made in opposition to the claims of Upper Canada for representation by population.

That Sir George Cartier, in his management of the affairs of Quebec, and indeed of the whole of Canada, used corrupt means is unquestionably but too true. We should set at naught historical truth if we did not state the fact. His legislative measures and his appointments to office were far too often guided by personal or corrupt party reasons. But he nevertheless retained in his personal intercourse a degree of straightforwardness and candour which commanded respect. He would, doubtless, have excused his errors on the ground that he was contending for what he considered the sacred rights and privileges of his countrymen, and that in purchasing support in Upper Canada he was only doing what was needful to check the encroachments of the people of the west.

Sir George Cartier was free from some prejudices which animate large sections of his French fellow-countrymen. While devoted to their interests he was extremely fond of English institutions and of English people. We believe that he looked forward to spending the evening of his days in the British capital under more favourable circumstances than those which marred the fulfilment of his wish. His attachment to the empire was not therefore the result of selfish considerations, but sprang from personal feeling, and although many of the measures to which he gave his countenance were far from beneficial to the Dominion of Canada and its connection with the British Empire, there is no doubt that he heartily desired the welfare of both. * * * For many years in the receipt of a large income, he was liberal in his expenditure and generous in his hospitality almost to a fault. He will probably be chiefly remembered in Lower Canada by the part which he took in the abolition of the seigniorial tenure, and by what he himself considered his crowning work, the codification of the law of that Province. In Upper Canada he will be remembered, if not as a friend, at least as a not ungenerous foe, with whom it was necessary to contend, but for whose courage and straightforwardness it was possible to retain a large amount of respect.

(From the Mail.)

Sir George Cartier was one of those men who are so constituted as to love power for power's sake. He valued it for its social advantages, and for the opportunities it afforded him of exercising authority and rule. He rarely abused his privilege. Generally he was one of the most approachable of Ministers, and his gruffness was more apparent than real. In the House it was often said of him that he was a better lieutenant than captain. He was certainly more frequently the former than the latter; but in this respect he felt, in common with all the other public men of the country who have come in contact with him, that it was no dishonour to continue to serve under one of Sir John Macdonald's remarkable talents and extraordinary ability. There was a fear that Sir George Cartier's dogmatic way, his "I-say-so-and-it-must-be-done" manner, would not be in place in the first Minister. It is undeniable, however, that during Sir John Macdonald's absence in Washington in 1871, Sir George led the House of Commons with great adroitness and with consummate ability, greatly disappointing many of his friends, who rather dreaded his bluntness when brought into play in the highest parliamentary position in the country. It is quite probable that had Fate so decided his place, he would have led the House with far more success than many persons not unfriendly to him have been willing to give him credit for.

(From Le Nouveau Monde, translated for Witness.)

The epoch of Mr. Cartier's great power was also that of his first faults which were to become fatal. The feeling of invincibility made him forget the source whence he derived his strength. He did not remember that if he had become the chief of Lower Canada it was precisely because he had identified himself with the Catholic cause, that he had devoted himself as the defender of the Church, and that he had never feared to avow himself eminently Catholic, and a submissive child of the Church. From 1865 he had taken an active part in the difficulties excited by the affair of the dismemberment of Montreal Parish, and had impelled his organ and his friends into a path of opposition and pitiful persecution which has ended in so deplorable a manner for him.

The attempt he pursued with so much perseverance to counteract the projects of his Bishop and procure the annulment of canonical degrees by the civil tribunals, destroyed the confidence of the Catholics, and initiated the ruin of the colossus. This fault was crowned by the abandonment of the Catholic cause in New Brunswick in 1871, and if it were desired to ascertain the harm Sir George did to himself and party, it is sufficient to compare the result of the elections of 1872 with those of 1867.

The death of Mr. Cartier is a great political event; it may seriously affect the future of the party which for twenty years he led to victory. It is not too much to affirm that he leaves no one to take his successorship who enjoys the influence, prestige and consideration which he was able to inspire by his great political quali-