Putting successively a=a, b=a, c=a, we get x, y and z, = -(b-c), -(c-a), -(a-b) respectively, from which it is plain that sum=0.—See TEACHERS' HANDBOOK OF ALGEBRA, p. 55.—See also pp. 119 and 120 for another method of solution.

- 3. (a) Put 3x-2y=k, and 4y-2x=m. \therefore Expression= $12k^2-44km-45m^4$ $= 12k^2+10km-54km-45m^2$

 - $=64 (x + y) (3x \overline{v}y)$ -See CANADA SCHOOL JOURNAL, March No., p. 53.
 - (b) (a+b-c+d)(a+b+c-d)(c+d-a+b)(c+d+a-b).

4. Expression vanishes for a=c, c=b, b=a, and for x=o, and the other factor, 1, is found in the usual way. (a-b)(b-c)(c-a)x. See TEACHERS' HANDBOOK, p. 39, and pp. 85, 89.

5. (x+y+z)(xy+yz+zx) - xyz = (x+y)(y+z)(z+x) = 8abc. -See Напрвоок, р. 85.

6. Assume $\frac{a}{y+z} = \frac{b}{z+x} = \frac{c}{x+y}$, then each fraction is

$$=\frac{a+b+c}{2(x+u+z)}; =\frac{a-b}{u-z}; \text{ and } =\frac{b-c}{u-z} \text{ and these must = only}$$

another, which is given true. Hence the assumption was true.-See HANDBOOK, p. 123 et seq.

7. (a) Complete the divisions, cancel quotients, and transpose thus :---. .

$$\left(\frac{1}{x-2} + \frac{1}{x-7}\right) - \left(\frac{1}{x-3} + \frac{1}{x-6}\right) = 0$$

$$(2x-9) \left[\frac{1}{x^2 - 10x + 21} - \frac{1}{x^2 - 10x + 24}\right] = 0$$

 $\therefore 2x-9=0$ is one solution, or $x=4\frac{1}{2}$. Also $x^2 - 10x + 21 = x^2 - 10x + 24$ is evidently another solution.

$$x e. \quad x - 10 + \frac{21}{r} = x - 10 + \frac{24}{x}$$

or
$$7 = \frac{8}{x}$$
, which can only be tru

when x is indefinitely increased, and $\frac{7}{x} = \frac{8}{x} = 0$

- $\begin{array}{l} x = \infty \text{ is the other root.} \text{HANDBOOK, p. 145.} \\ (b) \quad \frac{x(a-b)}{(x-a)(x-b)} = \frac{a-b}{x+c}; \ x \ (x+c) = (x-a) \ (x-b) \\ x = ab \div (a+b+c). \text{HANDBOOK, p. 143.} \\ (c) \quad \text{Put } x^2 9 = m, \text{ and factor, } (m-16)(m+5) = 0. \\ \therefore m-16 = 0, \text{ and } m+5 = 0 \text{ are the two solution} \end{array}$
- $\therefore m-16=0$, and m+5=0 are the two solutions. i. e. x=+5, or x=+2.
- 8. Add the equations as they stand, strike out the factor 5, and $\frac{1}{x} + \frac{1}{y} = \frac{1}{2}$, combine this with (1) and (2), and x = 1, y = -2

9.
$$\begin{bmatrix} 10\\ 13 \end{bmatrix} \begin{bmatrix} 3\\ 4 \end{bmatrix} \begin{bmatrix} 3r\\ 5 \end{bmatrix} = \begin{bmatrix} 2x\\ 7 \end{bmatrix}, x = 105.$$

Correspondence.

The two following letters taken from the Halifur Herald are of general interest. Dr. Rand while Chief Superintendent had ample means of knowing the misery of poor salaries to teachers. He has touched on the question that needs universal agitation.

TEACHERS' SALARIES.

To the Editor of the Herald :

Sin,-I observe by your issue of Saturday last that my remarks at Truro in reference to the remuneration of teachers have been considered of sufficient public interest to elicit your notice and criticism. In those remarks, I addressed myself solely to the cation, and in the maritime provinces. I may suggest, however, in reply to your enquiry respecting the small salaries paid to most of multiple professors, that as these colleges were founded and are and other towns of New Brunswick (including the Normal School and the provincial university), upwards of twenty; and Charlottemaintained by the several denominations of Christians as an import ant part of their benevolent work, those who have taught in them have generally been induced to do so quite as much from benevo-lent impulses as from any other considerations. Until such insti-tutions become largely endowed, or individuals establish particular to our teachers even so many really assured positions of emolument

chairs on liberal foundations, the remuneration of the "average professor," even though he be more learned and clover than the "average judge," must continue to be derived from other than pecuniary sources. Among the noblest supporters of these institutions are the ministers of religion. We all know how inadequate, as a rule, are the salaries paid in the maritime provinces to the members of this first and noblest of all professions. It is no part of my present duty to refer to causes or remedies in this regard ; but it is plain that so long as theso ministers receive a small suppost, they cannot be expected to promote the payment of salaries proportionate to the value of the services rendered by professors in the several colleges for which the former are each practically agents among their people. There are some ministers, however, who, very clearly recognizing the increasing difficulty of retaining the services of first-class men in these colleges on half pay, would gladly see them receive a proper pecuniary reward even though the churches fail to do their duty by those who minister to them. It but serves to give point to the suggestion I have thus ventured to offer, in reply to your enquiry, to say that in recent years both Dalhousio college and the university of New Brunswick have more liberally rewarded their professors than formerly, and that the salary of the president of Harvard college (reforred to by you) is some \$8,000 annually,—the friends of Harvard having two years ago donated and invested \$60,000, the annual income of which is added to the memident's former where of \$4,000 president's former salary of \$4,000.

The foregoing reference to the clergy leads me to say just here that were it necessary to detail the various causes which co-operate in inducing society to withhold from the teaching profession in the mantime provinces its just rewards, my experience and observation while superintendent of education in Nova Scotia and New Brunswick would warrant me in naming as very potent among these causes the fact that the teacher's work is closely associated in the public mind with that of the clergy. The teacher is justly regarded as one of the positive moral forces of the community, and in some way it comes to be thought that he, like the clergy, should not expect much salary. Has he not the conscioueness of doing good ? It seems, too, to be very generally forgotten that, in contrast with the sectional and often very limited local resources available for the support of the teachers of religion, the resources of the united com-munity in its civil capacity may be drawn upon for the support of the teacher of the public school. Communities which require the services of ministers of several denominations frequently need but one teacher for their public school. In view, therefore, of the fact that the smallness of the salaries provided by the churches for their ministers has, however unjustly or unnecessarily, a powerful in-flue 9 in preventing teachers from receiving a reasonable reward for their labors, it is to be hoped that teachers, notwithstanding they receive no marriage fees or "donations," will in the future, even more than in the past, seek to hasten the day when every minister of religion shall receive a salary in some respects commensurate with his labors and his deeds.

In my remarks at Truro I affirmed that the interests of the profession, the interests of education, the interests of the people-express it as you please, for there can be no real antagonism between these interests—require that a goodly number of teachers of the highest endowments and qualifications find their life-work in the educational service; that no profession, no skilled occupation even, is on a healthy basis unless it affords a career; and that the interest of the public schools requires, and it is entirely within the ability of society in the maritime provinces to furnish, such a number of important positions for teachers as shall serve as adequate prizes in the profession, I think the first two propositions are al-most too plain for argument, and that a knowledge of the necessities of public school administration and of the resources of our towns and cities will convince any one of the truth of the last two pro-positions. No person is qualified to discharge in the public interest the duties of superintendent, inspector, or supervisor who does not reach the position through the teacher's office. There are in the maritime provinces three superintendents and twenty-two inspectors and supervisors. Halifax and other towns of Nova Scotia ought to furnish from twenty to twenty-five first-class posi-tions for teachers, including those in the Normal School; St. John