partment, to secure as much efficiency as is consistent with economy. We quite approve of this; but let him do it in a manner consistent with his position as the Minister of an important Province, and not as if he were the trustee of a school section.

WE are gratified to know that the result of the case Barrett *vs.* Telford, at the recent Assizes held in Walkerton, was in favour of the defendant, who is Head Master of the Model School in the town named.

A number of Mr. Telford's pupils engaged in a fight during the "noon spell," but outside of the school premises. For this, they were punished corporally by the Head Master. Two of the belligerents thus chastised were sons of his honour Judge Barrett, who indignantly repudiated the legal right of Mr. Telford to inflict punishment under such circumstances. It was not claimed that the castigation was excessive, but simply that the fault having been committed outside of the school grounds, the teacher had no authority.

Judge Cameron, who tried the case, ruled otherwise, and it is well for the discipline of schools generally that Mr. Telford has been upheld. We heartily congratulate him upon the result.

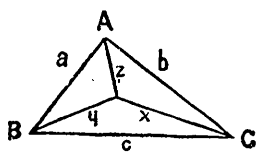
SCHOOL WORK.

MATHEMATICS.

ARCHIBALD MACMURCHY, M.A., TORONTO, EDITOR.

NOTE ON SOLUTION.

By E. FRISBY, M.A., Prof. Mathematics, U. S. N. Observatory, Washington.



If three lines are drawn from a point in a triangle making angles 120° with each other we obtain the three given equations;

also $(xy+yz+zx)\sin 120° = 2\Delta$,

or $9(xy+yz+zx)^2 = 48\Delta^2 = r^2$, or $xy+yz+zx = \frac{r}{3}$;

$$b^2+c^2+a^2 = 2(x^2+y^2+z^2)+xy+yz+zx;$$

$$\therefore x+y+z = \sqrt{\frac{b^2+c^2+a^2+r}{2}};$$

$$b^2+c^2-a^2 = 2x^2+xy+xz-yz,$$

$$b^2+c^2-a^2+\frac{r}{3} = 2x^2+2xy+2xz = 2x(x+y+z);$$

$$\therefore x = \frac{3(b^2+c^2-a^2)+r}{3\sqrt{2(b^2+c^2+a^2+r)}};$$

We might have dispensed with the geometrical figure by forming the equation

$4a^2b^2-(a^2+b^2-c^2)^2 = 16\Delta^2 = \frac{r^2}{3} = 3(xy+yz+zx)^2$, this would have been the value, but the solution would have been indirect.

Solution of No. 2 in March does not show that there are necessarily two, and only two solutions that can be done in this way.

$$\left.\begin{aligned} ax+by+c&=0\\ bx+cy+a&=0\\ cx+ay+b&=0\end{aligned}\right\}\quad \text{Eliminate } x\ y\ z$$

$a(bc-a^2)+b(ac-b^2)+c(ab-c^2)=0$,

or $a^3+b^3+c^3-3abc=0$,

or $(a+b+c)(a^2+b^2+c^2-ab-ac-bc) = 0$,

either of which factors are therefore $=0$, and these two are the only solutions.

SOLUTIONS.

(*See January No.*)

3. If $p^2+q^2+r^2 = 6\{(s-p)(s-q) + (s-q)(s-r) + (s-r)(s-p)\}$ and $2s = p+q+r$,