le lui donne. In the imperative affirmative, Donnez-le-moi, but Menez-y-moi.

13. Lagare Hoche p. 36, ll 16-27.

a. Par, why not *de*? *Par* governs the real agent, *de* the means employed by the agent, also *par* governs the agent if the verb expresses real action, *de* if the verb expresses sentiment.

b. d'Italie, why not de l'Italie?

The article is not used when the name of the country forms with the prep. a simple adjectival description of the preceding noun.

c. Explain the pronunciation of *cerf*, *chef*, *clef*, *nerf*, *neuf*; trans. nine oxen, new hats, and indicate the pronunciation.

Cerf, f mute, *chef*, f sounded, but mute in *chef-d'eouvre* (pron. shé-deu-vre), *clef*, f mute, *nerf*, f sounded but mute before a consonant and in the plural, *neuf*, nine, f sounded when alone or at the end of a phrase; f is sounded like v before a vowel, but in *neuf et demi*, *neuf en tout*, *neuf à manger* it retains the sound of f. Neuf boeufs (pron. neu-beu), des chapeaux neufs (dé-chapau neuf).

d. *Et*, when is the *t* in this word sounded?

The t of the French *et* is invariably mute; in the Latin *et cetera* t is sounded (pron. èt-sé-té-ra).

e. *Puis*, give a homonym of this word and translate the nom.

Puis, can, *puits*, well, pit.

MATHEMATICS.

Solutions to Algebra Paper in last number.

1. If $n > a + b$, $\therefore \frac{1}{n} < \frac{1}{a+b}$

$$\text{and } \frac{1}{a+b} < \frac{1}{a} + \frac{1}{b}$$

$$\text{if } \frac{1}{a+b} < \frac{a+b}{ab}$$

$$\text{if } ab < a^2 + 2ab + b^2$$

$$\therefore \frac{1}{n} < \frac{1}{a} + \frac{1}{b};$$

$$\text{but if } n < a + b$$

$$\therefore \frac{1}{n} > \frac{1}{a+b}$$

$$\text{but } \frac{1}{a} + \frac{1}{b} \text{ is also } > \frac{1}{a+b}$$

$\therefore$ it cannot be inferred that

$$\frac{1}{n} > \frac{1}{a} + \frac{1}{b}$$

2.

$$\begin{array}{r|rrrr|rrr}
 & 5 & +\,0 & +\,0 & -\,3 & +\,0 & +\,1 & \\
2 & & 10 & 20 & 10 & -\,46 & -\,122 & \\
-3 & & & -15 & -30 & -\,15 & +\,69 & +\,189 \\
\hline
 & 5 & +\,10 & +\,5 & -\,23 & -\,61 & -\,52 &
\end{array}$$

The remainder is $\therefore -61x + 70$, and the continuation of the quotient in descending powers of x is $-61x^{-1} - 52x^{-2}$ &c.

3. If we substitute $x - 1$ for x^2 in $(x^2-1)(x^2-2) + (x^2-x+1)^2 + (x^2 + x + 1)^2$ we have $(x-2)(x-3) + 0 + (2x)^2$ which reduces to $5x^2 - 5x + 6$ again substituting $x - 1$ for x^2 we have $5x - 5 - 5x + 6$ or 1 as the remainder after dividing by $x^2 - x + 1$.

If we put $x^2 = -x - 1$ we shall get the same result; $\therefore$ we have the same remainder whether we divide by x^2-x+1 or x^2+x+1.

4. These expressions reduce to

$$(x-y)(y-3)(x+2y+3)$$

$$(x-y)(y+1)(x+3y+2)$$

$\therefore x-y$ is their G. C. M.

If $y=1$, these become

$$-2(x-1)(x+5)$$

$$2(x-1)(x+5)$$

either of which may be taken as the G. C. M.

5. When $n = 0$, the expressions reduce to

$$(y-x)(x+y-a-b)$$

$$(a-b)(x+y-a-b)$$