2. From $S_x \equiv a^x + b^x + \ldots + k^x$,

(iii) $\left(\frac{a^x + b^x + \ldots + k^x}{n}\right)^{\frac{1}{x}}$ constantly increases as x increases from $-\infty$ to $+\infty$, and has the limiting value $(a.b.\ldots.k)^{\frac{1}{n}}$ when $x = 0$.

3. From $\cos x$,

(ii) $(\cos x)^{y-z} . (\cos y)^{z-x} . (\cos z)^{x-y} < 1$, if $\frac{\pi}{2} > x > y > z > 0$.

(iii) $(\cos x)^{\frac{1}{x}}$ constantly decreases as x increases from 0 to $\frac{\pi}{2}$ and has the limiting value 1, when $x = 0$.

(iv) $(\cos x)^p . (\cos y)^q . < \left(\cos \frac{px + qy}{p+q}\right)^{p+q}$, $\frac{\pi}{2} > x > y > 0$ and p and q positive.]

On Mathematical Instruments and the accuracy to be obtained with them in some elementary practical problems.

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