$$\phi(x)=\frac{1}{2l}\int_{-l}^{+l}\phi(v)\,dv+\frac{1}{\pi}\Sigma\left\{\int_{-l}^{+l}\cos w(x-v).\phi(v)dv\Delta w\right\}, \qquad \text{(A)}$$

should the integral in the second term of the right hand member become indeterminate when l is put $=\infty$, I suppose $\epsilon^{\mp\lambda x}\phi(x)$ to be put for $\phi(x)$ according as x is positive or negative, when (A) becomes

$$\epsilon^{\mp\lambda x}\phi(x)=\frac{1}{2l}\int_{-l}^{+l}\epsilon^{\mp\lambda v}\phi(v)\,dv+\frac{1}{\pi}\Sigma\left\{\int_{-l}^{+l}\cos w(x-v).\epsilon^{\mp\lambda v}\phi(v)dv\Delta w\right\}, \qquad \text{(A*)}$$

which will now remain determinate when l becomes infinite, and, after the integrations are performed, we can obtain $\phi(x)$ by putting $\lambda=0$ in the result.

In justice to De Morgan I ought to notice that he has given Poisson's formula in the same order as (XII) in which there is no danger of putting $l=\infty$ too soon. But he does not say at what stage κ is to be put equal to 0. His words, if they indicate anything as to this point, seem to me to say that this is to be done before any of the integrations are effected. Besides this, he does not seem to see that his form labours under the same fault, if fault it be, with which he charges the verifications he discusses, namely, the order of integration is inverted.

Theorems on three mutually tangent circles.

By THOMAS MUIR, M.A., LL.D.

This paper will appear later.

MR WILLIAM PEDDIE gave some notes on Reflected Rainbows, in which the bow and its reflection due to the image of the sun were discussed in relation to the ordinary bow and its reflection.
