

circle, so that the circular ring may be equal to the three-fifths of the smaller circle.

$$r = \sqrt{\frac{5 R^2}{8}} \quad \text{N. S.}$$

$$= \sqrt{R \times \frac{5 R}{8}} \quad \text{G. S.}$$

PROBLEM LVIII.

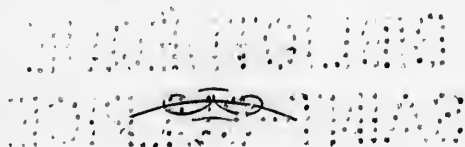
To make the same construction (see Problem LVII.) so that the circular ring may be a mean proportional between the two circles.

$$r = -\frac{R}{2} \pm \sqrt{R^2 + \frac{R^2}{4}}$$

PROBLEM LIX.

To make the same construction so that the interior circle may be a mean proportional between the exterior circle and the circular ring.

$$r = \pm \sqrt{-\frac{R^2}{2} \pm \sqrt{R^4 \pm \frac{R^4}{4}}}$$



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