In Fig. 2(*b*), which is the case of the hyperbola,

$$\angle \text{ACD is supplementary to } \angle \text{RP}_1\text{P}_2,$$

and $$\angle \text{BCD} = \angle \text{RP}_2\text{P}_1 = \angle \text{RP}_1\text{P}_2.$$

Therefore angles ACD and BCD are supplementary.

G. PHILIP

Note on Geometric Series.—The formula for the sum of n terms of the geometric series

$$a + ar + ar^2 + \ldots + ar^{n-1},$$

viz. $$s = \frac{a(r^n - 1)}{r - 1}, \text{ may be written } s = \frac{\text{T}_{n+1} - \text{T}_1}{r - 1},$$

where T_1 is the first term and T_{n+1} the term immediately succeeding the last to be summed This form is useful for finding the sum of a closed geometric series without first finding the number of terms. Thus

$$\tfrac{1}{8} + \tfrac{1}{4} + \tfrac{1}{2} + \ldots\ldots\ldots + 32 = \frac{64 - {}^1/_8}{2 - 1},$$

and $$a^{-5} + a^{-3} + a^{-1} \ldots\ldots + a^{19} = \frac{a^{21} - a^{-5}}{a^2 - 1},$$

since the terms of the series which succeed 32 and a^{19} are respectively 64 and a^{21}.

R. J. T. BELL

Distance of the Horizon.—The approximate rules given in this note may perhaps be new to some readers.

If an observer be at a height h above the Earth's surface, the distance of the horizon as seen by him is given by the formula

$$d = \sqrt{2rh},$$

where r is the radius of the Earth.

If h is given in feet, then

$$\sqrt{\left(\frac{h}{5280} \times 8000\right)}$$

will give d in miles.

Now $$\tfrac{8000}{5280} = \tfrac{100}{66} = \tfrac{3}{2}, \text{ nearly.}$$