12. In a plane triangle there are given

a=562 feet.
b=320 feet.
c=128° 4′.

Show how the remaining angles and sides are to be found.

13. Explain the method of finding the area of a triangle in land surveying, and apply it to the case in which the three sides are 33, 42.6, and 52.6 feet respectively.

14. Prove that (Cos. $A+\sqrt{-1}$ Sin. $A)^m$=Cos. m $A+\sqrt{-1}$ Sin. m A, whether m be whole or fractional.

15. Show that in the solution of oblique angled spherical triangles there can arise only four cases, and write down the Equation for each.

16. Prove Napier's rules for the solution of right angled spherical triangles when the complement of an angle is the middle part; and explain under what modifications they are applicable to the solution of quadrantal triangles.

17. Show how to determine the time by an observed altitude of the Sun out of the Meridian.