## MENSURATION.

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13. What is the area of a Hexagon whose side is 5 inches? Ans. 64.951905 in.

14. What is the area of an Octagon whose side is 60 yards? Ans. 3 a. 2 r. 14 per. 19 yds.

A CIRCLE is a figure bounded by a curve line, called the circumference, which is every where equidistant from a point within, called the centre. The radius of a circle is a straight line drawn from the centre to the circumference. The diameter is a line drawn through the centre, to the circumference on both sides.

To find the Diameter and Circumference of a Circle, the one from the other. Multiply the diameter by 3.1416 gives the circumference. Divide the circumference by 3.1416 gives the diameter.

15. What is the circumference of a circle whose diameter is 20 yards? Ans. 62.832 yards.

16. What is the diameter of a circle whose circumference is 78.54 feet?

To find the area of a circle. Multiply the square of the diameter by .7854;—or multiply the square of the circumference by .07958. Hence, the area being given, to find the diameter or circumference, is only to reverse the process.

17. Required the area of a circular orchard whose circumference is 56.5 rods or poles. 18. What is the area of a circular pond whose diameter is 31 yards? Ans. 754.7694 sq. yds.

19. I want a circular garden that shall occupy just half an acre: how many feet long will the stone wall te that encloses it? Ans. 523.15 feet.

20. In the midst of a meadow well stored with grass,

I took just an acre to tether my ass; How long must the cord be, that, feeding all round, He mayn't graze less or more than an acre of ground? Ans. 39.25+ yards.

To find the area of the surface of a sphere or globe. Multiply the square of the dismeter by 3.1416.

21. Required the superficial area of a globe whose drameter is 12 inches. Ans. 452, 3904 sq. in.

22. How meny equare miles in the surface of the carth, supposing it a sphere of 7912 unites diancelar. Ans. 196,663,355,7504 sq. m.