9. Construct an equilateral triangle with sides of $1\frac{1}{2}$ in., and construct another with area twice the former.

10. Construct a right-angled triangle with sides 30, 40 and 50 millimetres. On the sides describe equilateral triangles. Divide the triangles into smaller ones, so that the smaller ones may all be equal to one another. What relation do you discover between the area of the triangle on the hypotenuse and the areas of the two other triangles?

11. In the preceding question, instead of equilateral triangles, construct triangles with angles adjacent to the sides of 50° and 80°, so that the three triangles are similar. Again compare areas of smaller triangles with area of greatest.

12. Any line being taken as unity, construct for other lines which shall represent $\sqrt{2}$ and $\frac{1}{\sqrt{2}}$.

Hence draw lines parallel to the base of any triangle so as to form with sides, or sides produced, triangles half and twice the original.

13. The areas of the provinces of the Dominion being,—P. E. I., 2000; N. S., 20600; N. B., 28200; M., 73956; O., 222000; Q., 347350; B. C., 383300 square miles; and the square roots of these numbers being 45, 144, 168, 272, 471, 589, 619, or approximately as 5, 14, 17, 27, 47, 59, 62; construct seven equilateral triangles, all with same vertex, whose areas shall represent proportionately the areas of the provinces.

14. Draw also seven parallel lines, near one another, and all terminated at one end by the same straight line to which they are perpendicular, so that these lines may approximately represent the areas of the provinces.

15. Given the following areas,—England, 50867; Ireland, 32583; Scotland, 29785; Wales, 7442, construct four squares, with one angle in common, which shall represent proportionately and approximately the areas of these countries.

16. Draw also four parallel lines, as in 14, which shall represent approximately the areas of the countries of the United Kingdom.