3. Make figures as in § 1 and § 2 for the following problems:

Two similar triangles, **ABC** and **DEF**, have their corresponding sides **BC** and **EF**, 1 and 2 inches in length respectively; show that their areas are as 1 to 4, *i.e.*, as 1 to 2^2.

Two similar triangles, **ABC** and **DEF**, have their corresponding sides **BC** and **EF**, 1 and $1\frac{1}{2}$ inches in length respectively; show that their areas are as 4 to 9, *i.e.*, as 1 to $(1\frac{1}{2})^2$.

Two similar triangles, **ABC** and **DEF**, have their corresponding sides **BC** and **EF**, 30 and 50 millimetres in length respectively; show that their areas are as 9 to 25, *i.e.*, as $(30)^2$ to $(50)^2$.

(For the three preceding constructions, the method of article 4, which follows, should also be employed.)

The result of our observations in such cases as the preceding may be stated thus:

Similar triangles are to one another as the squares of corresponding sides.

Note: In the preceding examples it will be observed that the lengths of the corresponding sides are supposed *commensurable*, *i.e.*, a unit of length can be found that is contained in both an exact number of times. All lines are not commensurable, though the preceding statement in black-face is true of all similar triangles, whether the corresponding sides be commensurable or not.

4. The following is possibly a more striking way of presenting the preceding proposition: