1. Draw a regular hexagon. Draw another similar hexagon whose sides are three times as long as the sides of the first. How much larger is the second hexagon than the first?

2. Draw an octagon. Draw another similar octagon whose sides are one-half those of the first octagon. Compare their areas.

3. Draw a polygon. Draw another similar polygon four times as large as the first. Compare the corresponding sides.

4. Draw two similar pentagons, one having five times the perimeter of the other. What is the ratio of their sides? of their areas?

5. One side of a triangle containing 300 sq. ft. is 40 ft. The corresponding side of a similar triangle is 50 ft. What is its area?

6. If one side of a hexagon containing 4000 sq. ft. is 60 ft., what is the corresponding side of a similar hexagon whose area is 10,000 sq. ft.?
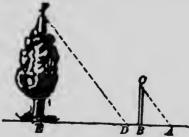
7. If the area of a piece of land in the form of an equilateral triangle is 840 sq. rd., what is the area of a similarly formed piece of land each of whose sides is $2\frac{1}{2}$ times as long?

8. If the base of a triangle is 12 ft. and its area is 20 sq. ft., what is the area of a similar triangle whose base is 40 ft.?

9. If one side of a triangular lot of land is 140 ft., what must be the length of the corresponding side of a lot of the same shape that is 3 times as large?

10. I have a triangular board 8 ft. long. At what distance from the base end shall I cut it to divide it into two equal parts?

11. To find the height of the tree EF: The shadow of the tree extends to the point $D = 26$ ft. from the foot of the tree. A pole 11 feet high casts a shadow 8 feet = the distance AB. What can you say of the two triangles ABC and DEF? $AB : DE = BC : ?$

12. If a post 6 ft. high casts a shadow $2\frac{1}{2}$ ft., how high is a house which at the same time casts a shadow 15 ft.? (Draw figure and explain.)