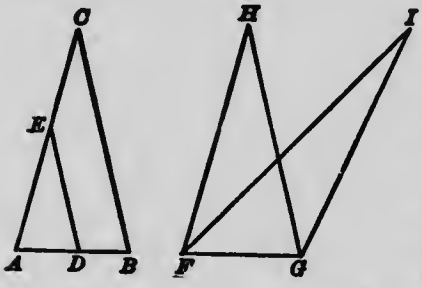
1. Give the formula for finding the area of a triangle when the base and altitude are given; for finding the base; for finding the altitude.



2. From what you have learned, show what three triangles are equal; what two triangles are equivalent; what two triangles are similar.

3. Obtain the formula for finding the area of a trapezoid, letting a and c represent the two parallel sides, and h the altitude.

4. Show how the area of any polygon is obtained. What measurements must be given?

5. Can you divide an irregular hexagon into right triangles and trapezoids?

6. Draw a regular pentagon. Draw a line from each angle to the centre. Let fall a perpendicular from the centre to each side of pentagon. Calling this perpendicular line the *apothem* of the pentagon, obtain the formula for finding the area of a regular pentagon (represent the perimeter by p and the apothem by r). In the same way obtain the formula for finding the area of any regular polygon.

7. Can you transform a parallelogram into an equivalent triangle?

8. Can you transform a triangle into an equivalent parallelogram?

9. Can you transform a trapezoid into an equivalent triangle? into an equivalent parallelogram?

10. Can you transform a regular pentagon into an equivalent triangle?

11. Can you divide a square into four equal squares? into six equal rectangles? into eight equal right-angled triangles?

12. Can you divide a rectangle into four equal rectangles?

13. Can you divide a triangle into three equivalent triangles? into any number of equivalent triangles?

14. Can you divide a parallelogram into six equal parallelograms? into any number of equal parallelograms?