1. Define and give illustration of each of the following parts of a triangle : *base ; sides ; altitude ; vertex.*

2. Show that the sum of two sides of a triangle is always greater than the third side.

3. Show in any way you can that the sum of the angles of a triangle is equal to two right angles.

4. Draw a triangle. Prolong one side. Show that the exterior angle is equal to the sum of the two opposite interior angles.

5. Show that the angles of an equilateral triangle are equal.

6. Show that the angles opposite the equal sides of an isosceles triangle are equal.

7. Show that two triangles are equal if two sides and included angle of one triangle are equal to the two sides and included angle of the other.

8. Show that two triangles are equal if a side and two angles of one triangle are equal to a side and two angles of the other.

9. Show that two triangles are equal if three sides of one triangle are equal to three sides of the other.

10. Draw two equal right-angled triangles; two equal obtuse-angled triangles; two equal acute-angled triangles.

11. Draw a triangle having a base two inches long, one angle of 90°, and one angle of 45°. What is the other angle ? What is the length of each of the other sides ?

12. Draw a triangle whose sides are as follows :

_____   _____   _____

What is the size of each angle ?

13. Draw a right-angled triangle whose sides are 3 inches, 4 inches, and 5 inches.

14. Draw to scale an isosceles triangle whose sides represent a length of 42 feet, and whose vertex is an angle of 25°. How long is the base ?

15. Draw a triangle whose sides are 4 inches, 5 inches, and 6 inches long. Size of the angles ? What kind of a triangle is it ?