In a right-angled triangle, given :

1. The base 60 ft., perpendicular 80 ft., to find the hypothenuse.
2. The perpendicular 20 ft., base 15 ft., to find the hypothenuse.
3. The base 18 rd., perpendicular 40 rd., to find the hypothenuse.
4. The base 48^m, perpendicular 36^m, to find the hypothenuse.
5. The hypothenuse 80 ft., base 50 ft., to find the perpendicular.
6. The hypothenuse 150 rd., perpendicular 90 rd., to find the base.
7. The hypothenuse 28 yd., perpendicular 20 yd., to find the base.

8. Can you construct a square equal to the sum of two given squares ?

9. Can you construct a square equal to the difference between two given squares ?

10. Can you show that in an isosceles right-angled triangle a line extending from the right angle perpendicular to the hypothenuse is equal to half the base ?

11. The side of an equilateral triangle is 40 ft. Find the altitude; find the area.

12. The side of a square is 18 ft. Find the diagonal.

13. What is one side of a square if the diagonal is 100 ft. ?

14. Find the diagonal of the floor of a room 18 ft. long and 16 ft. wide; 26 ft. long and 20 ft. wide.

15. What is the length of a ladder which will reach to the top of a house 42 ft. high, if the foot of the ladder is placed 18 ft. from the house ?

16. How far from a house 28 ft. high must a ladder 38 ft. long be placed that the top of the ladder may reach to a point just 6 ft. from the top of the house ?

17. What is the diagonal on the floor of a room 26 ft. square ?

18. If A's house is 50 rods north of a given point, and B's house is 42 rods east of the same point, how far apart are the houses ?

19. The diagonal of a square lot is 36 rods. What is one side ?

20. A room is 18 ft. long, 16 ft. wide, and 10 ft. high. What is the distance from a lower corner to the opposite upper corner ?

21. Required the diagonal of a square 6-acre field.