

8. What is the area of a parallelogram, whose length is 12.25 chains, and breadth 8.50 chains?

Ans. 10 a. 1 r. 26 per.

9. How many square yards of painting in a rhomboid, whose length is 12 ft. 3 in. and breadth 5 ft. 4 in.?

Ans. 7 yd. 2 ft. 4 in.

10. What is the area of a rhombus, whose length is 6.20 chains, and perpendicular height 5.45?

Ans. 3 a. 1 r. 20.64 per.

When a quadrilateral is irregular in its sides and angles, it is called a *trapezium*. A line joining 2 opposite angles of a trapezium is called a *diagonal*.

To find the area of a trapezium: Multiply the diagonal by the sum of the perpendiculars drawn to it from the opposite angles, and half the product will be the area.

11. Required the area of a trapezium, the diagonal being 42 yards, and the perpendiculars falling upon it from the opposite angles 18 and 16 yards.

Ans. 714 yards.

12. What is the area of a trapezium, whose diagonal is 17.56 chains, and the perpendiculars 8.82 and 7.73 chains?

Ans. 14 a. 2 r. 5 per.

To find the area of an irregular figure of 5, 6, 7, &c., sides. Draw diagonals dividing the figure into trapeziums and triangles. Then find the areas of all these separately, and add them together for the area or content of the whole figure.

Examples may be given at pleasure.

When all the sides and all the angles of a 5, 6, 7, &c., sided figure are equal, it is called a regular polygon.

To find the area of a regular polygon: Multiply the square of one of its sides by the number opposite its name in the following table.

No. of Sides.	Names.	Multipliers.
5	Pentagon	1.7204774
6	Hexagon	2.5980762
7	Heptagon	3.6399126
8	Octagon	4.8284272
9	Nonagon	6.1818240
10	Decagon	7.6942088
11	Undecagon	9.3656411
12	Dodecagon	11.1961524