

Trapezoid (C)

A trapezoid is a quadrilateral with one and only one pair of parallel sides. The distance between the parallel sides is called the **altitude** of the trapezoid, and the parallel sides are called the bases. If the altitude of a trapezoid has length h and the bases have lengths B and b then the area of the trapezoid is

$$\text{Area} = \frac{1}{2} (b + B)h.$$

If the non-parallel sides have equal length, the trapezoid is called an **isosceles** trapezoid.

Exercises

1. A trapezoid has bases of length 2 and 4 and altitude 6. What is its area?
2. The altitude of a trapezoid is equal to the length of the shorter base. The shorter base is half the length of the longer base. Write a formula for the area of this trapezoid in terms of the altitude.