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.