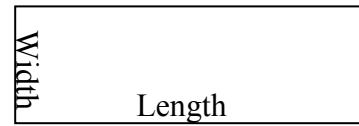


Area of Quadrilaterals

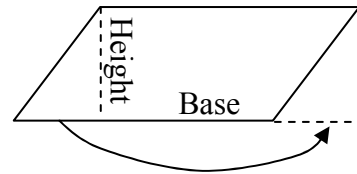
Rectangles: Area = Length times Width ($A = lw$)

This is the most basic formula for area of any four-sided figure.



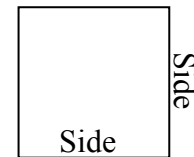
Parallelograms: Area = Base times Height ($A = bh$)

This is a slight modification of the rectangle Formula. Length becomes Base, Width becomes Height. If we could snip off the triangle at the left end of our parallelogram and transfer it to the right end, we would have a rectangle with the same area.



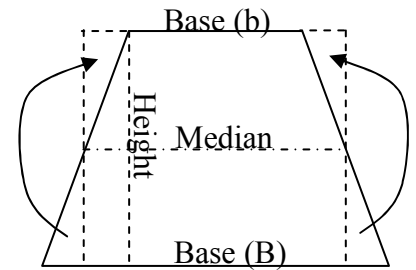
Squares: Area = side times side (or side “squared”) $A = s^2$

A square is a rectangle with all sides congruent, so the length and width are the same (we call them “side”)

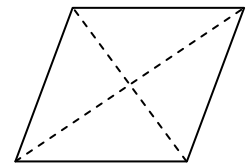


Trapezoid: Area = Height times the average of the Bases

$A = \frac{1}{2} (B + b)h$ (or any variation). As in the parallelogram, if we could snip off the triangles shown (formed by the base and the midpoints of the legs) and move them as shown, we would have a rectangle the same height as the trapezoid and a base the length of the segment connecting the legs’ midpoints (the “Median”).



Rhombus: Since a rhombus is a parallelogram, we could use the same formula if we know the height. But since the diagonals of a rhombus are perpendicular bisectors of each other, we can use this formula also: Area = $\frac{1}{2}$ times diagonal #1 times diagonal #2. ($A = \frac{1}{2} d_1d_2$). This uses the fact that the diagonals form four right triangles, or two congruent isosceles triangles.



Kite: A kite has many of the same properties of a rhombus, so the diagonal formula will work for kites also. ($A = \frac{1}{2} d_1d_2$)

This formula will also work for a deltoid.

