## Area and Perimeter Formulas

## Triangles - Common

A polygon with three angles and three sides.


Area $=\frac{1}{2}$ base x height $=\frac{1}{2} \mathrm{bh}$
Perimeter $=\mathbf{a}+\mathbf{b}+\mathbf{c}$

## Equilateral Triangles

A Triangle with all three sides of equal length.
Area $=\frac{\sqrt{3}}{4} x(\text { side })^{2}=\frac{\sqrt{3}}{4} s^{2}$
Perimeter $=3 \mathbf{x}$ sides $=3 \mathrm{~s}$

## Isosceles Triangles



A Triangle with two sides of equal length.
Area $=\frac{a}{4} \sqrt{4 b^{2}-a^{2}}$
Perimeter =a+2b


## Right Triangles

A Triangle with one right angle.
Area $=\frac{\mathrm{ba}}{2}$
Perimeter $=\mathbf{a + b}+\mathbf{c}$

## Square



A Square is a quadrilateral with four equal sides and angles at $90^{\circ}$.
Area $=a^{2}$
Perimeter $=4 \mathrm{a}$

## Area and Perimeter Formulas

## Rectangle

A Rectangle is a quadrilateral with four equal angles at $90^{\circ}$.
Area $=\mathbf{a b}$

Perimeter $=2(a+b)$

## Parallelogram



A Parallelogram is a quadrilateral with opposite sides parallel.
Area $=\mathrm{bh}$
Perimeter $=2(a+b)$

## Rhombus

A Rhombus is a Parallelogram with all sides equal.

a


## Trapezoid

A Trapezoid is a Quadrilateral with at least one pair of parallel sides.
Area $=\frac{a 1+a 2}{2} h$
Perimeter = $\mathbf{a} 1+\mathbf{a} \mathbf{+} \mathbf{b} 1+\mathbf{b} 2$

## Regular n-gon



A Regular Polygon is a polygon for which n sides and angles are equal.
Area $=\frac{1}{2}(a n s)$
Perimeter $=\mathbf{n} \mathbf{s}$

