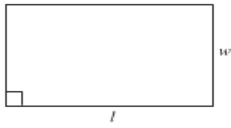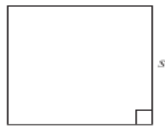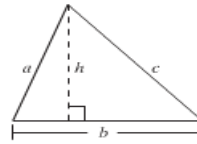# Geometric Formulas

Rectangle

Perimeter: $P = 2l + 2w$
Area: $A = lw$

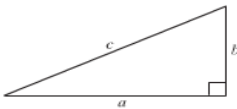### Square

Perimeter: $P = 4s$
Area: $A = s^2$

Triangle

Perimeter: $P = a + b + c$
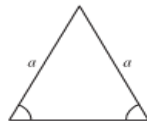Area: $A = \frac{1}{2}bh$

Sum of Angles of Triangle

$A + B + C = 180°$
The sum of the measures of the three angles is 180°.

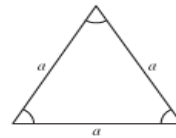### Pythagorean Theorem (for right triangles)

$a^2 + b^2 = c^2$
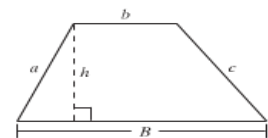One 90° (right) angle

Isosceles Triangle

Triangle has:
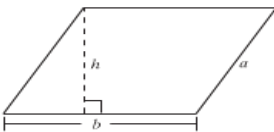two equal sides and
two equal angles.

Equilateral Triangle

Triangle has:
three equal sides and
three equal angles.
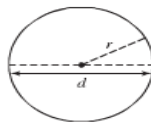Measure of each angle is 60°.

Trapezoid

Perimeter:
$P = a + b + c + B$
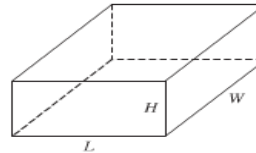Area: $A = \frac{1}{2}h(B + b)$

Parallelogram

Perimeter: $P = 2a + 2b$
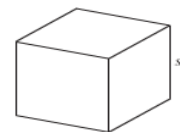Area: $A = bh$

Circle

Circumference: $C = \pi d$
$C = 2\pi r$
Area: $A = \pi r^2$
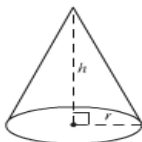
Rectangular Solid

Volume: $V = LWH$
Surface Area:
$S = 2LW + 2HL + 2HW$

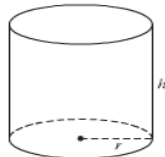### Cube

Volume: $V = s^3$
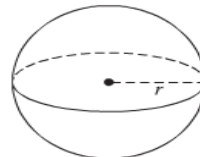Surface Area: $S = 6s^2$

Cone

Volume: $V = \frac{1}{3}\pi r^2 h$
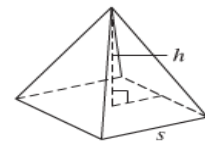
Right Circular Cylinder

Volume: $V = \pi r^2 h$
Surface Area:
$S = 2\pi r^2 + 2\pi rh$

Sphere

Volume: $V = \frac{4}{3}\pi r^3$
Surface Area: $S = 4\pi r^2$

Square-Based Pyramid

Volume: $V = \frac{1}{3} \cdot s^2 \cdot h$