

## Formulas

### Perimeter

$$\text{Square} = s + s + s + s$$

$$\text{Rectangle} = 2L + 2W$$

$$\text{Triangle} = s + s + s$$

$$\text{Trapezoid} = s + s + s + s$$

$$\text{Circle (Circumference)} = \pi D$$

### Area

$$\text{Square} = S^2$$

$$\text{Rectangle} = L * W$$

$$\text{Triangle} = \frac{1}{2} BH$$

$$\text{Trapezoid} = \frac{1}{2}H (B_1 + B_2)$$

$$\text{Circle} = \pi R^2$$

### Volume

$$\text{Cube} = S^3$$

$$\text{Rectangle} = L * W * H$$

$$\text{Cylinder} = \pi R^2 H$$

$$\text{Cone} = \frac{1}{3} \pi R^2 H$$

$$\text{Sphere} = \frac{4}{3} \pi R^3$$

$$\text{Pyramid} = \frac{1}{3} S^2 H$$

### Surface area

$$\text{Cube} = 6S^2$$

$$\text{Rectangle} = 2LW + 2LH + 2WH$$

$$\text{Cylinder} = 2\pi R^2 + 2\pi RH$$

$$\text{Cone} = \pi R^2 + \pi RL$$

$$\text{Sphere} = 4\pi R^2$$

$$\text{Pyramid} = S^2 + 2SL$$

### Pythagorean Theorem

$$A^2 + B^2 = C^2$$

### Congruency of Triangles

SSS

SAS

ASA