|  | Lateral area | Surface Area | Volume |
| :--- | :--- | :--- | :--- |
| Cube | $L A=P h$ <br> $P=$ perimeter $=2 l+2 w$ <br> $h=$ height $l=$ length,$w=$ width | $S A=L A+2 B$ <br> $B=$ base $=l w$ | $V=B h=l w h$ |
| Prism | $L A=P h$ <br> $P=$ perimeter of base <br> $h=$ height | $S A=L A+2 B$ <br> $B=$ area of base <br> (depends on shape of base) | $V=B h$ |
| Cylinder | $L A=$ Ch $=2 \pi r h$ <br> $C=$ circumference $=2 \pi r$ <br> $h=$ height,$r=$ radius | $S A=L A+2 B=2 \pi r h+2 \pi r^{2}$ <br> $B=$ base $=\pi r^{2}$ | $V=B h=\pi r^{2} h$ |


|  | Lateral area | Surface Area | Volume |
| :--- | :--- | :--- | :---: |
| Pyramid | $L A=\frac{1}{2} P \ell$ <br> $\ell=$ slant height | $S A=L A+B$ <br> $B=$ area of base <br> (depends on shape of base) | $V=\frac{1}{3} B h$ |
| Cone | $L A=\frac{1}{2} C \ell=\pi r \ell$ | $S A=L A+B$ <br> $B=\pi r^{2}$ <br> $S A=\pi r \ell+\pi r^{2}$ | $V=\frac{1}{3} B h=\frac{1}{3} \pi r^{2} h$ |


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


|  | Area | Perimeter |
| :--- | :--- | :--- |
| Triangle | $A=\frac{1}{2} b h$ | $P=$ sum of sides |
| Square | $A=s^{2}$ <br> $s=$ length of side of square | $P=4 s=$ sum of sides |
| Rectangle | $A=l w$ | $P=2 l+2 w=$ sum of sides |
| Trapezoid | $A=\frac{1}{2}\left(b_{1}+b_{2}\right) h$ |  |
| Regular Polygon | $A=\frac{1}{2}$ Pa $=\frac{1}{2} n s a$ <br> $P=$ perimeter, $a=$ apothem <br> $n=$ number of sides, $s=$ length of side | $P=n s=$ sum of sides |


|  | Area | Circumference |
| :--- | :---: | :--- |
| Circle | $A=\pi r^{2}$ | $C=2 \pi r=\pi D$ <br> $D=$ diameter |


| Pythagorean Theorem | $c^{2}=a^{2}+b^{2} \quad$ right triangle) <br> $c=$ hypotenuse,$a \& b=$ legs of triangle |
| :--- | :--- |

