

Chapter 11 Summary Sheet

Important: The formula's with a ★ will be given to you on every test and on the CST.
The rest of the formula's you must know or be able to derive yourself.

A_B : Area of Base

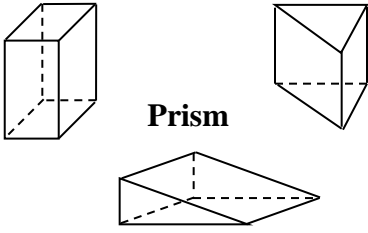

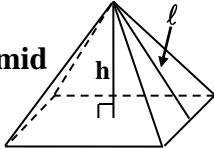
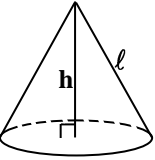
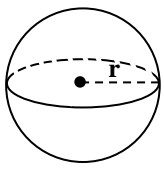
A_T : Area of Triangle

h : Height

N_T : Number of Triangles

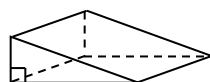
l : Slant Height

Surface Area and Volume Formulas

| | Surface Area | Volume |
|--|--|---|
|  <p>Prism</p> | <p>Find the area of all the faces and add them up</p> | $V = A_B h$ <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Same Formula</div> <div style="text-align: center;">↓</div> |
|  <p>Cylinder</p> | <p>Find the area of all the faces and add them up</p> | $V = (\pi r^2) h$ |
|  <p>Pyramid</p> | <p>Find the area of all the faces and add them up</p> | $V = \frac{1}{3} A_B h$ <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Same Formula</div> <div style="text-align: center;">↓</div> |
|  <p>Cone</p> | <p>★</p> <p style="text-align: center;">Lateral Area</p> $S = \pi r^2 + \overbrace{\pi r l}$ | <p>★</p> <div style="text-align: center;">↓</div> $V = \frac{1}{3} \pi r^2 h$ |
|  <p>Sphere</p> | <p>★</p> $S = 4\pi r^2$ | <p>★</p> $V = \frac{4}{3} \pi r^3$ |

Important: Students will often make the mistake of assuming the base of the following prism is a rectangle, but recall that a prism has both a top and bottom base that are congruent. In the example below, the base of the prism is not a rectangle, but a triangle.

Ex: 1 base



Flip Up



2 bases

