

Final Formula Sheet

DO NOT WRITE ON THIS SHEET

A = area, B = area of base, C = circumference, L.A. = Lateral Area, P = perimeter, S.A. = Total Surface Area, V = Volume, a = apothem, b = length of base, d = diagonal, h = height, l = slant height, n = number of sides, r = radius, s = length of side

Perimeter

Polygon : P = sum of side lengths

Square : $P = 4s$

Rectangle : $P = 2b + 2h$

Triangle: P = sum of sides of triangle

Regular n - gon: $P = ns$

Circle: $C = 2\pi r$

Arc length of $\widehat{AB} = \frac{m\widehat{AB}}{360^\circ}(2\pi r)$

Area

Rectangle : $A = bh$

Triangle: $A = \frac{1}{2}bh$

Parallelogram: $A = bh$

Trapezoid: $A = \frac{1}{2}h(b_1 + b_2)$

Rhombus: $A = \frac{1}{2}d_1d_2$ or $A = bh$

Kite: $A = \frac{1}{2}d_1d_2$

Equilateral Triangle: $A = \frac{s^2\sqrt{3}}{4}$

Regular Polygon: $A = \frac{1}{2}ap$

Circle: $A = \pi r^2$

Area of Sector: $A = \frac{m\widehat{AB}}{360^\circ}(\pi r^2)$

Surface Area

Right Prism: L.A. = sum of areas of lateral faces

$$S.A. = L.A. + 2B$$

Right Cylinder : L.A. = Ch

$$S.A. = L.A. + 2B$$

Regular Pyramid: L. A. = sum of areas of lateral faces

$$S.A. = L.A. + B$$

Right Cone: L.A. = πrl

$$S.A. = L.A. + B$$

Sphere: $S.A. = 4\pi r^2$

Volume

Prism: $V = Bh$

Cylinder: $V = Bh$

Pyramid: $V = \frac{1}{3}Bh$

Cone: $V = \frac{1}{3}Bh$

Sphere: $V = \frac{4}{3}\pi r^3$

Miscellaneous

Sum of the measures of the interior angles of a regular polygon: $S = (n - 2)180^\circ$

Sum of the measures of the exterior angles of a regular polygon: $S = 360^\circ$

Number of diagonals in any polygon: $d = \frac{n(n-3)}{2}$

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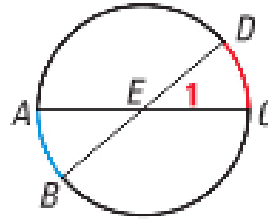
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Circles

Angles and segments formed by two chords:

$$m\angle 1 = \frac{1}{2}(m\widehat{CD} + m\widehat{AB})$$

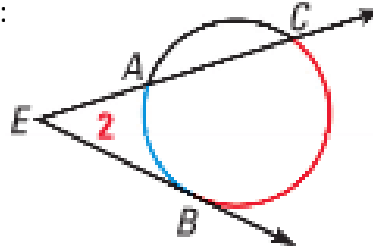
$$EA \cdot EC = EB \cdot ED$$



Angle and segments formed by a tangent and a secant:

$$m\angle 2 = \frac{1}{2}(m\widehat{BC} - m\widehat{AB})$$

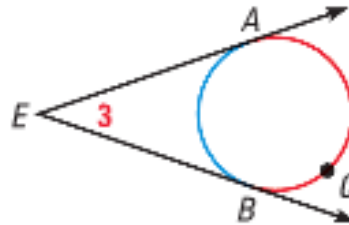
$$EB^2 = EA \cdot EC$$



Angle and segments formed by two tangents:

$$m\angle 3 = \frac{1}{2}(m\widehat{AQB} - m\widehat{AB})$$

$$EA = EB$$



Angle and segments formed by two secants:

$$m\angle 4 = \frac{1}{2}(m\widehat{CD} - m\widehat{AB})$$

$$EA \cdot EC = EB \cdot ED$$

