QualityCore™

Reference Sheet for the QualityCore™
Geometry End-of-Course Assessment

Area, Volume, and Surface Area of Polygons and Solids

Triangle	$A = \frac{1}{2}bh$
Parallelogram	$A = bh$
Trapezoid	$A = \frac{1}{2}(b_1 + b_2)h$
Regular Polygon	$A = \frac{1}{2}ap$
Regular Prism	$V = Bh$ $SA = 2B + Ph$
Right Circular Cylinder	$V = \pi r^2 h$ $SA = 2\pi r^2 + 2\pi rh$
Pyramid	$V = \frac{1}{3}Bh$ $SA = B + \frac{1}{2}Pl$
Right Circular Cone	$V = \frac{1}{3}\pi r^2 h$ $SA = \pi r^2 + \pi rl$
Sphere	$V = \frac{4}{3}\pi r^3$ $SA = 4\pi r^2$

A = area
b = base
h = height
a = apothem
p = perimeter
V = volume
B = area of base
SA = surface area
P = perimeter of base
r = radius
l = slant height
$\pi \approx 3.14$

Angles of Polygons

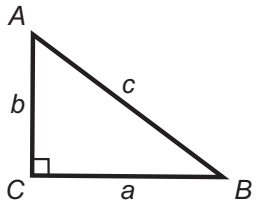
Sum of Degree Measures of the Interior Angles of a Polygon	$180(n - 2)$
Degree Measure of an Interior Angle of a Regular Polygon	$\frac{180(n-2)}{n}$

n = number of sides

Right Triangles

Right Triangle Trigonometry	$\sin A = \frac{a}{c}$ $\cos A = \frac{b}{c}$ $\tan A = \frac{a}{b}$
Pythagorean Theorem	$a^2 + b^2 = c^2$

Given:



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Equations of a Line

Standard Form	$Ax + By = C$	A, B, and C are constants with A and B not both equal to zero.
Slope-Intercept Form	$y = mx + b$	(x_1,y_1) is a point.
Point-Slope Form	$y - y_1 = m(x - x_1)$	m = slope b = y-intercept

Coordinate Geometry

Slope	$m = \frac{y_2 - y_1}{x_2 - x_1}$	(x_1,y_1) and (x_2,y_2) are 2 points.
Midpoint	$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$	m = slope M = midpoint
Distance	$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$	d = distance

Circles

Equation of a Circle	$(x - h)^2 + (y - k)^2 = r^2$	center (h,k)
Area Formula	$A = \pi r^2$	r = radius A = area
Circumference Formula	$C = \pi d = 2\pi r$	C = circumference
Area of a Sector with Central Angle θ	$A = \frac{\theta}{360}\pi r^2$	d = diameter $\pi \approx 3.14$

Key to Symbols

ΔABC	triangle ABC
$\angle ABC$	angle ABC
$m\angle ABC$	the degree measure of angle ABC
$\overleftrightarrow{AB}$	line AB
$\overline{AB}$	line segment AB
AB	the length of line segment AB
Circle O	circle with center point O
$\overset{\frown}{AB}$	arc AB
$\perp$	is perpendicular to
$\parallel$	is parallel to
$\cong$	is congruent to
$\sim$	is similar to
$\approx$	is approximately equal to

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