Georgia Milestones Assessment System

Geometry Formula Sheet

Below are the formulas you may find useful as you work the problems. However, some of the formulas may not be used. You may refer to this page as you take the test.

Geometry Formulas

Perimeter

The perimeter of a polygon is equal to the sum of the length of its sides.

Distance Formula

$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

Coordinates of point which partitions a directed line segment AB at the ratio of $a:b$ from $A(x_1, y_1)$ to $B(x_2, y_2)$

$(x, y) = \frac{bx_1 + ax_2}{b + a}, \frac{by_1 + ay_2}{b + a}$

OR

$(x, y) = \left(x_1 + \frac{a}{a + b}(x_2 - x_1), y_1 + \frac{a}{a + b}(y_2 - y_1)\right)$

Circumference of a Circle

$C = \pi d$ or $C = 2\pi r$

$\pi \approx 3.14$

Arc Length of a Circle

Arc Length $= \frac{2\pi r\theta}{360}$

Area

Triangle	$A = \frac{1}{2}bh$
Rectangle	$A = bh$
Circle	$A = \pi r^2$

Area of a Sector of a Circle

$Area\ of\ Sector = \frac{\pi r^2\theta}{360}$

Pythagorean Theorem

$a^2 + b^2 = c^2$

Trigonometric Relationships

$\sin\theta = \frac{opp}{hyp}$; $\cos\theta = \frac{adj}{hyp}$; $\tan\theta = \frac{opp}{adj}$

Equation of a Circle

$(x - h)^2 + (y - k)^2 = r^2$

Volume

Cylinder	$V = \pi r^2 h$
Pyramid	$V = \frac{1}{3}Bh$
Cone	$V = \frac{1}{3}\pi r^2 h$
Sphere	$V = \frac{4}{3}\pi r^3$

Statistics Formulas

Conditional Probability

$P(A/B) = \frac{P(A\ and\ B)}{P(B)}$

Multiplication Rule for Independent Events

$P(A\ and\ B) = P(A) \cdot P(B)$

Addition Rule

$P(A\ or\ B) = P(A) + P(B) - P(A\ and\ B)$