Geometry Final Exam – Formulas

Lines

$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$$

Circles

$C = 2\pi r$ $\qquad\qquad\qquad A = \pi r^2$

Polygons

$A = bh$ $\qquad A = \frac{1}{2}bh$ $\qquad A = \frac{1}{2}(b_1 + b_2)h$ $\qquad A = \frac{1}{2}ap$

$A = \sqrt{s(s-x)(s-y)(s-z)}$ $\qquad\qquad A = \frac{1}{2}xy\,(\sin Z)$

Pythagorean Theorem and Related

$a^2 + b^2 = c^2$ $\qquad d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ $\qquad d = \sqrt{\ell^2 + w^2 + h^2}$

Trigonometry

$\sin \theta = \dfrac{\text{Opposite}}{\text{Hypotenuse}}$ $\qquad \cos \theta = \dfrac{\text{Adjacent}}{\text{Hypotenuse}}$ $\qquad \tan \theta = \dfrac{\text{Opposite}}{\text{Adjacent}}$

Prisms and Cylinders

$L = ph$ $\qquad\qquad S = 2B + L$ $\qquad\qquad V = Bh$

Pyramids and Cones

$L = \frac{1}{2}p\ell$ $\qquad\qquad S = B + L$ $\qquad\qquad V = \frac{1}{3}Bh$

Spheres

$S = 4\pi r^2$ $\qquad\qquad V = \frac{4}{3}\pi r^3$