Mathematics 20-2 Data Sheet

Quadratic formula	*z*-score formula
$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	$z = \frac{x - \mu}{\sigma}$

Sine Law	Cosine Law
$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$ or $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$	$a^2 = b^2 + c^2 - 2bc\cos A$ $b^2 = a^2 + c^2 - 2ac\cos B$ $c^2 = a^2 + b^2 - 2ab\cos C$

Circle Circumference	Circle Area
$C = \pi \times$ diameter or $C = 2 \times \pi \times$ radius $C = \pi d$ or $C = 2\pi r$	$A = \pi \times$ square of the radius $A = \pi r^2$

Area of a Triangle	Area of a Rectangle	Area of a Parallelogram	Area of a Trapezoid
$A = \frac{1}{2} \times$ base $\times$ height $A = \frac{1}{2}bh$	$A =$ length $\times$ width $A = lw$	$A =$ base $\times$ height $A = bh$	$A = \frac{1}{2} \times$ sum of bases $\times$ height $A = \frac{1}{2}(b_1 + b_2)h$

Formulas for Volume (*V*) and Surface Area (*SA*)

Rectangular Prism	$V =$ length $\times$ width $\times$ height $V = lwh$	$SA = 2lw + 2hw + 2lh$
General Prisms	$V =$ area of base $\times$ height $V = Bh$	$SA =$ sum of the areas of the faces
Right Cylinder	$V = \pi r^2 h$	$SA = 2\pi r^2 + 2\pi rh$
Right Pyramid	$V = \frac{1}{3} \times$ area of the base $\times$ height $V = \frac{1}{3}l^2 h$ or $V = \frac{1}{3}Bh$	$SA = l^2 + 2ls$
Right Cone	$V = \frac{1}{3}\pi r^2 h$	$SA = \pi r^2 + \pi rs$
Sphere	$V = \frac{4}{3}\pi r^3$	$SA = 4\pi r^2$

Areas under the Normal Curve