



DCAS REFERENCE SHEET

End-Of-Course Algebra II/Integrated Mathematics III

AREAS OF POLYGONS

Parallelogram	$A = bh$
Rectangle	$A = bh$
Square	$A = s^2$
Triangle	$A = \frac{1}{2}bh$
Trapezoid	$A = \frac{1}{2}h(b_1 + b_2)$

CIRCLES

$$C = 2\pi r \quad A = \pi r^2$$
$$(x - h)^2 + (y - k)^2 = r^2$$

PROBABILITY

$${}^nC_r = \frac{n!}{r!(n-r)!}$$

$${}^nP_r = \frac{n!}{(n-r)!}$$

General Addition Rule

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

Conditional Probability

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

ANGLE MEASUREMENT

$$\pi \text{ radians} = 180^\circ \quad s = r\theta$$

$$1^\circ = \frac{\pi}{180} \text{ rad} \quad 1 \text{ rad} = \frac{180^\circ}{\pi}$$

VOLUMES

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

SUM & DIFFERENCE OF CUBES

$$a^3 - b^3 = (a - b)(a^2 + ab + b^2)$$

$$a^3 + b^3 = (a + b)(a^2 - ab + b^2)$$

DIFFERENCE OF SQUARES

$$a^2 - b^2 = (a + b)(a - b)$$

QUADRATIC FORMULA

$$ax^2 + bx + c = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

OTHER

Compound Interest

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

Continuous Compound Interest

$$A = Pe^{rt}$$