A copy of this formula sheet will be provided for the comprehensive assessments and the final exam. It is your responsibility to know when and how to use each formula.

- $d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$
- $f(x) = a(x - h)^2 + k$
- $S_n = \dfrac{n(a_1 + a_n)}{2}$
- $a_n = a_m + (n - m)d$
- $(x - h)^2 + (y - k)^2 = r^2$
- $v = \left(-\dfrac{b}{2a}, f\left(-\dfrac{b}{2a}\right)\right)$
- $x^3 + y^3 = (x + y)(x^2 - xy + y^2)$
- $x^3 - y^3 = (x - y)(x^2 + xy + y^2)$
- $\text{AROC} = \dfrac{f(x_2) - f(x_1)}{x_2 - x_1}$
- $\sin(\alpha \pm \beta) = \sin(\alpha)\cos(\beta) \pm \sin(\beta)\cos(\alpha)$
- $\cos(\alpha \pm \beta) = \cos(\alpha)\cos(\beta) \mp \sin(\alpha)\sin(\beta)$
- $\sin(2x) = 2\sin(x)\cos(x)$
- $\cos(2x) = \cos^2(x) - \sin^2(x) = 1 - 2\sin^2(x) = 2\cos^2(x) - 1$
- $\sin\left(\dfrac{\alpha}{2}\right) = \pm\sqrt{\dfrac{1 - \cos(\alpha)}{2}}$
- $\cos\left(\dfrac{\alpha}{2}\right) = \pm\sqrt{\dfrac{1 + \cos(\alpha)}{2}}$