

1 | polynomials

$$1.1 \mid x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

2 | volume

$$2.1 \mid \text{sphere: } A = \frac{4}{3}\pi r^3$$

$$2.2 \mid \text{cylinder: } A = \pi r^2 h$$

$$2.3 \mid \text{cone: } A = \frac{1}{3}\pi r^2 h$$

3 | trig

$$3.1 \mid \sin(a + b) = \sin a \cos b + \cos a \sin b$$

$$3.2 \mid \cos(a + b) = \cos a \cos b - \sin a \sin b$$

4 | cubes

$$4.1 \mid a^3 + b^3 = (a + b)(a^2 + b^2 - ab)$$

$$4.1.1 \mid a^3 - b^3 = (a - b)(a^2 + b^2 + ab)$$

$$4.2 \mid (a + b)^3 = a^3 + b^3 + a^2b + b^2a$$

5 | taylor series

$$5.1 \mid f(x) \text{ near } a = f(a) + \frac{f'(a)}{2}x^2 + \frac{f''(a)}{3!}x^3$$

6 | polar

$$6.1 \mid e^{i\theta} = \cos \theta + i \sin \theta$$