1 Cheat Sheet for EE463

1.1 Pythagorean theorem

The well known Pythagorean theorem $x^2 + y^2 = z^2$ was proved to be invalid for other exponents. Meaning the next equation has no integer solutions:

$$x^n + y^n = z^n$$

1.2 Examples

$$x = \frac{1 + y}{1 + 2z^2}$$

$$\int_0^\infty e^{-x^2} dx = \frac{\sqrt{\pi}}{2}$$

$$V_{av} = \frac{\sqrt{6} * 3 * V_d}{\pi} - \frac{3wL_sI_d}{\pi}$$

$$V_{av}(\alpha) = \frac{\sqrt{6} * 3 * V_d}{\pi} - \frac{\sqrt{6} * 3 * V_d}{\pi} * (1 - \cos(\alpha))$$

$$\sin A \cos B = \frac{1}{2} \left[\sin(A - B) + \sin(A + B) \right]$$

$$\sin A \sin B = \frac{1}{2} \left[\sin(A - B) - \cos(A + B) \right]$$

$$\cos A \cos B = \frac{1}{2} \left[\cos(A - B) + \cos(A + B) \right]$$