

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

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

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

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

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

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