## lab9

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April 2024

## 1 Easy

$$e^{i\pi} + 1 = 0 \tag{1}$$

$$e^{i\theta} = \cos\theta + i\sin\theta \tag{2}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8G\pi}{c^4} T_{\mu\nu} \tag{3}$$

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

$$\vec{L} = \vec{r} \times \vec{p} \tag{5}$$

$$\sqrt[3]{2} \tag{6}$$

$$(x+y)^n = \sum_{r=0}^n \binom{n}{r} x^r y^{n-r} \tag{7}$$

$$\sqrt{\frac{a_1^2 + \dots + a_n^2}{n}} \ge \frac{a_1 + \dots + a_n}{n} \ge \sqrt[n]{a_1 + \dots + a_n} \ge \frac{n}{\frac{1}{a_1} + \dots + \frac{1}{a_n}}$$
(8)

$$|\langle x, y \rangle|^2 \le \langle x, x \rangle \cdot \langle y, y \rangle$$
 (9)

(10)

A1: 
$$\varphi \longrightarrow (\psi \rightarrow \varphi)$$

A2: 
$$(\varphi \to (\psi \to \theta)) \longrightarrow ((\varphi \to \psi) \to (\varphi \to \theta))$$

A3: 
$$(\neg \varphi \to \neg \psi) \longrightarrow (\psi \to \varphi)$$
 (11)