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Polaris

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$$1 + 1 = 2 \tag{1}$$

$$\frac{\sin \alpha}{a} = \frac{\sin \beta}{b} = \frac{\sin \gamma}{c} \tag{2}$$

$$c^2 = a^2 + b^2 - 2ab \cos \gamma \tag{3}$$

$$\log xy = \log x + \log y \tag{4}$$

$$e = \lim_{n \to \infty} \left(1 + \frac{1}{n}\right)^n \tag{5}$$

$$\frac{d}{dx} f(x) = \lim_{h \to 0} \frac{f(x+h) - f(x)}{h} \tag{6}$$

$$\int_a^b f(x) \mathrm{d}x = F(b) - F(a) \tag{7}$$

$$i^2 = -1 \tag{8}$$

$$e^{ix} = \cos x + i \sin x \tag{9}$$

$$r = \frac{p}{1 + e \cos \theta} \tag{10}$$

$$f(x) = \sum_{n=0}^{\infty} \frac{f^{(n)}(a)}{n!} (x-a)^n \tag{11}$$

$$\widehat{f}(\xi) = \int_{-\infty}^{\infty} f(x) e^{2\pi i x \xi} \mathrm{d}x \tag{12}$$

$$F(s) = \int_0^{\infty} f(t) e^{-st} \mathrm{d}t \tag{13}$$

$$\int_{\partial\Omega} \omega = \int_{\Omega} \mathrm{d}\omega \tag{14}$$

$$\oint_C (L\, dx + M\, dy) = \iint_D \left(\frac{\partial M}{\partial x} - \frac{\partial L}{\partial y}\right) dA \tag{15}$$

$$f(x) = \frac{1}{\sqrt{2\pi\sigma^2}} e^{-\frac{(x-\mu)^2}{2\sigma^2}} \tag{16}$$

$$H = -\sum_x p(x) \log p(x) \tag{17}$$

$$\mathbf{F} = \frac{GMm}{r^3}\mathbf{r} \tag{18}$$

$$\mathbf{F} = \frac{d}{dt}\mathbf{p} = m\mathbf{a} \tag{19}$$

$$E_{mech} = K + U \tag{20}$$

$$\mathbf{L} = \frac{d}{dt}\tau = \mathbf{r} \times \mathbf{p} = I\omega \tag{21}$$

$$F_{con} = -\frac{\partial U}{\partial x} \tag{22}$$

$$\nabla^2 \Psi = 4\pi G\rho \tag{23}$$

$$\nabla \cdot \mathbf{E} = \frac{\rho}{\epsilon_0} \tag{24}$$

$$\nabla \cdot \mathbf{B} = 0 \tag{25}$$

$$\nabla \times \mathbf{E} = -\frac{\partial \mathbf{B}}{\partial t} \tag{26}$$

$$\nabla \times \mathbf{B} = \mu_0 \left(\mathbf{J} + \epsilon \frac{\partial \mathbf{E}}{\partial t}\right) \tag{27}$$

$$p + \frac{1}{2}\rho v^2 + \rho g h = C \tag{28}$$

$$pV = nRT \tag{29}$$

$$\mathrm{d}E_{int} = \delta Q - \delta W \tag{30}$$

$$\oint \frac{\delta Q}{T} \leq 0 \tag{31}$$

$$\frac{\partial^2 u}{\partial t^2} = c^2 \frac{\partial^2 u}{\partial x^2} \tag{32}$$

$$\rho \left[\frac{\partial \mathbf{v}}{\partial t} + \mathbf{v} \cdot \nabla \mathbf{v} \right] = -\nabla p + \mu \nabla^2 \mathbf{v}^2 + \mathbf{f} \tag{33}$$

$$\frac{1}{\mu} + \frac{1}{\nu} = \frac{1}{f} \tag{34}$$

$$m_1 - m_2 = -2.5 \lg \left(\frac{F_1}{F_2} \right) \tag{35}$$

$$f(v) = 4\pi v^2 \left(\frac{m}{2\pi k T} \right)^{3/2} \exp\left\{ -\frac{m v^2}{2kT} \right\} \tag{36}$$

$$B_\nu(T) = \frac{2h\nu^3}{c^2} \frac{1}{\exp\{\frac{h\nu}{kT}\} - 1} \tag{37}$$

$$E = \gamma m c^2 \tag{38}$$

$$\Delta x \Delta p \geq \frac{\hbar}{2} \tag{39}$$

$$i\hbar \frac{\partial}{\partial t} \Psi(x,t) = \left[-\frac{\hbar^2}{2m} \frac{\partial^2}{\partial x^2} + V(x,t) \right] \Psi(x,t) \tag{40}$$

$$G_{\mu\nu} = -\frac{8\pi G}{c^4} T_{\mu\nu} \tag{41}$$

$$H^2 = \frac{8\pi G}{3c^2} \epsilon - \frac{\kappa c^2}{R_0^2 a^2} + \frac{\Lambda}{3} \tag{42}$$