Formula Penting Fizik

jannah halil :: smk kalumpang, kkb

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Tempoh ayunan bandul :- $$T = 2\pi\sqrt{\frac{1}{g}}$$	Sesaran :- $$s = \frac{1}{2}(u+v)t$$ $$s = ut + \frac{1}{2}at^2$$
Halaju :- $$v = u + at$$ $$v^2 = u^2 + 2as$$	Daya graviti :- $$F = \frac{Gm_1m_2}{r^2}$$
Pecutan graviti :- $$g = \frac{GM}{r^2}$$	Daya memusat :- $$F_c = \frac{mv^2}{r}$$
Halaju orbit :- $$v = \sqrt{\frac{GM}{r}}$$	Hukum Kepler :- $$T^2 = \left(\frac{4\pi^2}{GM}\right)r^3 \rightarrow T^2 \propto r^3$$ $$\frac{T_1^2}{T_2^2} = \frac{r_1^3}{r_2^3}$$
Halaju lepas :- $$v = \sqrt{\frac{2GM}{r}}$$	Tenaga kinetik :- $$KE = \frac{1}{2}mv^2$$
Muatan haba tentu :- $$c = \frac{Q}{m\Delta\theta}$$	Tenaga Keupayaan Graviti :- $$U = -\frac{GMm}{r}$$
Hukum Boyle :- $$P \propto \frac{1}{V}$$	Haba pendam tentu :- $$l = \frac{Q}{m}$$
Laju gelombang :- $$v = f\lambda$$	Hukum Charles :- $$V \propto T$$
Hukum Snell :- $$n_1\sin\theta_1 = n_2\sin\theta_2$$ $$n = \frac{\sin i}{\sin r}$$	Pembiasan gelombang :- $$\frac{v_1}{\lambda_1} = \frac{v_2}{\lambda_2}$$
Interferens gelombang :- $$\lambda = \frac{ax}{D}$$	Sudut genting, c :- $$n = \frac{1}{\sin c}$$
Pecutan memusat :- $$a_c = \frac{v^2}{r}$$	Formula kanta :- $$\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$$

Tenaga nuklear :- $$E = mc^2$$	Tenaga kuantum :- $$E = h f$$
Sifat kedualan gelombang zarah, momentum :- $$p = mv \ (sifat\ zarah)$$ $$p = \frac{h}{\lambda}(sifat\ gelombang)$$	Teori Fotoelektrik Einstein :- $$hf = W + \frac{1}{2}mv^2$$
Hukum Hooke :- $$F = kx$$	Tenaga keupayaan kenyal :- $$E_p = \frac{1}{2}Fx$$ $$E_p = \frac{1}{2}kx^2$$
Tekanan cecair :- $$p = h\rho g$$	Prinsip pascal, pengganda daya :- $$\frac{F_1}{A_1} = \frac{F_2}{A_2}$$
Prinsip Archimedes, daya apungan :- $$F_B = \rho V g$$	Prinsip Bernoulli , daya angkat :- $$F = (P_2 - P_1)A$$
Kekuatan medan elektrik :- $$E = \frac{F}{Q}$$	Arus elektrik :- $$I = \frac{Q}{t}$$
Beza keupayaan :- $$V = \frac{W}{Q}$$	Rintangan dawai :- $$R = \frac{\rho l}{A}$$
Hukum Ohm :- $$R = \frac{V}{I}$$	Tenaga kinetik elektron :- $$E_k = eV = \frac{1}{2}mv_m^2$$
Daya gerak elektrik :- $$\varepsilon = V + Ir$$	Kuasa elektrik :- $$P = VI = I^2R = \frac{V^2}{R}$$
Kecekapan transformer :- $$\eta = \frac{kuasa\ output}{kuasa\ input} \times 100\%$$ $$= \frac{V_sI_s}{V_pI_p} \times 100\%$$	Jumlah rintangan dalam litar :- $$Sesiri : R_T = R_1 + R_2 + R_3 + \cdots$$ $$Selari : \frac{1}{R_T} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \cdots$$

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