

# Formelark fysikk 1

## Mekanikk

$$v = s'(t)$$

$$a = v'(t)$$

$$v = v_0 + at$$

$$s = v_0 t + \frac{1}{2} at^2$$

$$2as = v^2 - v_0^2$$

$$\Sigma F = 0 \quad \text{når } v = \text{konstant}$$

$$\Sigma F = ma$$

$$F' = -F$$

$$G = mg$$

$$W = Fs \cos \alpha$$

$$E_k = \frac{1}{2} mv^2$$

$$E_p = mgh$$

$$W_{\Sigma F} = \Delta E_k$$

$$E = E_p + E_k$$

$$E_2 = E_1$$

$$P = \frac{W}{t} = \frac{E}{t}$$

$$\eta = \frac{\text{nyttbar energi}}{\text{tilført energi}} = \frac{\text{nyttbar effekt}}{\text{tilført effekt}}$$

## Lys og bølger

$$f = \frac{1}{T}$$

$$v = f \lambda$$

$$S_2 P - S_1 P = n \lambda$$

## Termofysikk

$$T = 273 \text{ K} + t$$

$$\Delta U = Q + W$$

$$L = AM$$

$$L = AE$$

$$M = \sigma T^4$$

$$\lambda_{\text{topp}} = \frac{a}{T}$$

## Elektrisitet

$$I = \frac{Q}{t}$$

$$U = \frac{W}{q}$$

$$R = \frac{U}{I}$$

$$U = RI$$

$$W = qU$$

$$P = UI$$

$$R_s = R_1 + R_2 + \dots + R_n$$

$$\frac{1}{R_p} = \frac{1}{R_1} + \frac{1}{R_2} + \dots + \frac{1}{R_n}$$

## Moderne fysikk

$$E_f = hf$$

$$E_n = -\frac{B}{n^2}$$

$$E = mc^2$$

$$v = Hr$$