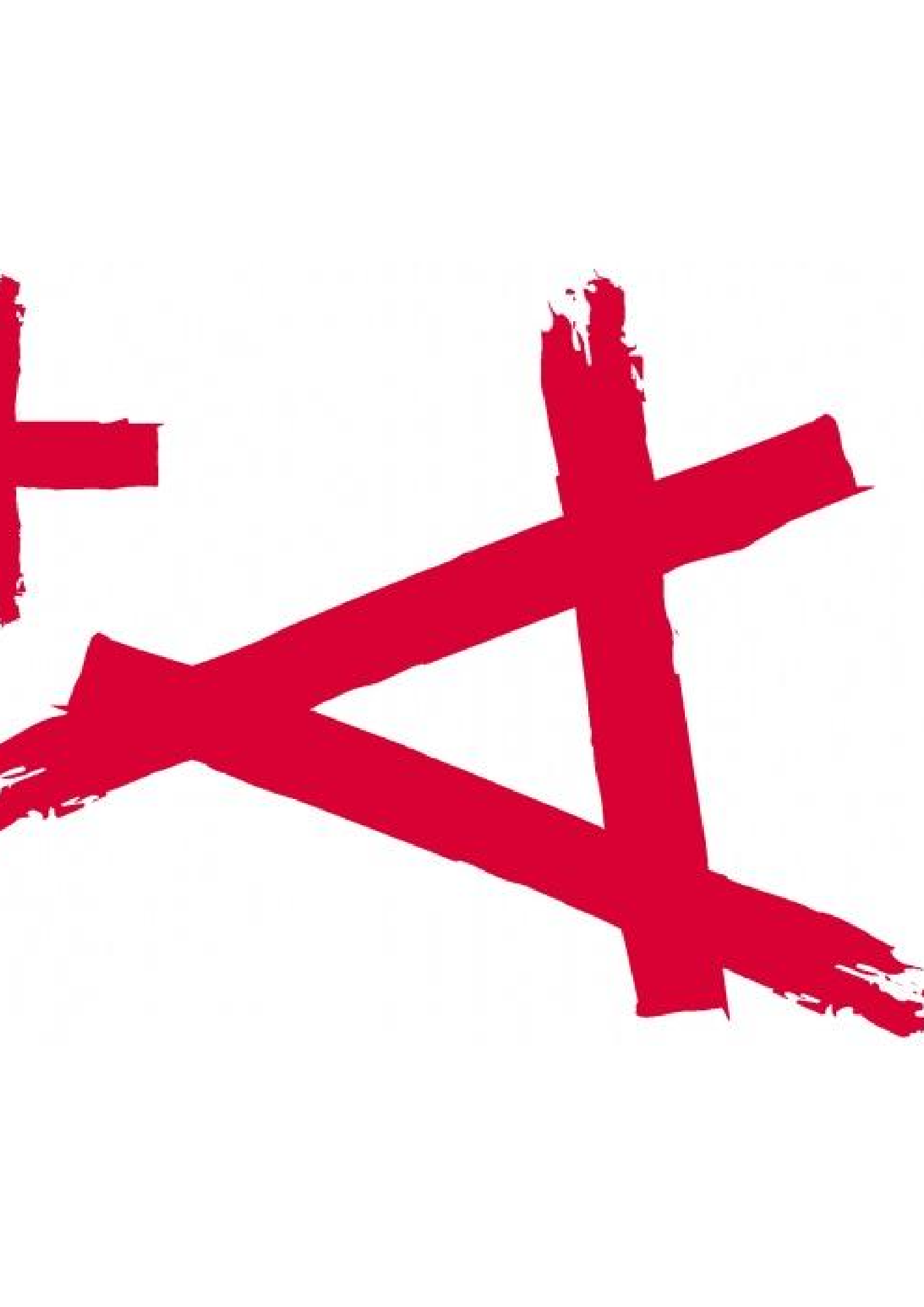




HER OPTIONS FOR PHYSICAL SCIENCES P1

If used option 2 in 3.3 and uses the value in 3.4 option 2 APPLY positive marking

- 1-2. ACCEPT principle of conservation of momentum
2. ACCEPT Principle of conservation of

OPTION 2

$$(m_1 + m_2)v_i = m_1v_{1f} + m_2v_{2f}$$

$$W_{\text{net}} = \Delta E_k$$

both equations must
there for a learner to tick.

both equations 1 mark
let velocity of $m_1 = x$ and $m_2 = y$

alby vergelykings 1 punt
laat snelheid van $m_1 = x$ en $m_2 = y$

$$\checkmark 0 = 0,4x + 1,2(-y) \checkmark$$

$$x = 3y$$

$$E_{K m1} = \frac{1}{2} m_1 (3y)^2 \text{ or } \frac{1}{2} 0,4 (3y)^2$$

$$E_{K m2} = \frac{1}{2} m_2 (y)^2 \text{ or } \frac{1}{2} 1,2 y^2$$

$$E_{K m1} : E_{K m2} = 3:1 \checkmark$$

$$R // = \frac{R_1 R_2}{R_1 + R_2} \checkmark$$

$$R // = \frac{2 \times 2}{2 + 2} \checkmark$$

$$= 1 \Omega$$

OPTION 2

$$P = \frac{W}{\Delta t} \checkmark$$

$$P = \frac{3 \times 0,8 \times 1}{2} = 1,2 W \checkmark$$

$$P = V \times I \checkmark$$

$$V \times I \times \frac{80}{100} = 1,2 \checkmark$$

$$6 \times I \times \frac{80}{100} = 1,2$$

$$I = 0,25 A \checkmark$$

Accept cosine graph for 1 cycle

$$P = 1,2 W$$

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

$$W = 1,2 \times 2 = 2,4 J$$