

Vraag 1a

Geg:

$$U = 12 \text{ V} \qquad I = 6000 \text{ mA}$$

Gev:

P in (w)

Form:

$$P = U \times I$$

Inv:

$$I = 6000 \text{ mA} \rightarrow 6 \text{ A} \quad (/1000)$$

$$P = 12 \times 6 = \underline{72 \text{ W}}$$

Vraag 1b

Geg:

$$P = 72 \text{ W (zie 1b)} \quad t = 1.5 \text{ h}$$

Gev:

E in (kwh) per week

Form:

$$E = P \times t$$

Inv:

$$P = 72 \text{ W} \rightarrow 0.072 \text{ Kw} \quad (/1000)$$

$$E = 0.072 \times 1.5 = 0.108 \text{ kwh per dag}$$

$$E = 0.108 \times 7 = \underline{0.756} \text{ kwh per week}$$

Vraag 1c

$$0.756 \times 1.12 = \underline{\underline{\text{€ } 0.85}}$$

Vraag 2

Geg:

Oven: $P = 3000 \text{ W}$ $t = 3 \text{ h (per dag)}$

Vaatwasser: $P = 2.0 \text{ Kw}$ $t = 12 \text{ h (per week)}$

föhn: $P = 75 \text{ W}$ $t = 30 \text{ mi (per dag)}$

1 kwh = € 0.56

Gev:

Energiekosten per week

Form:

$$E = P \times t$$

Inv:

Oven:

$$P = 3000 \text{ W} \rightarrow 3 \text{ Kw} \quad (/1000)$$

$$E = 3 \times 3 = 9 \text{ kwh per dag}$$

$$E = 9 \times 7 = \underline{63 \text{ kwh per week}}$$

Vaatwasser:

$$E = 2 \times 12 = \underline{24 \text{ kwh per week}}$$

(zie volgende blz)

Fohn:

$$P = 75 \text{ W} \rightarrow 0.075 \text{ Kw} \quad (/1000)$$

$$t = 30 \text{ min} \rightarrow 0.5 \text{ h} \quad (/60)$$

$$E = 0.075 \times 0.5 = 0.038 \text{ kwh per dag}$$

$$E = 0.038 \times 7 = \underline{0.27 \text{ kwh per week}}$$

$$\text{Totale energie is: } 63 + 24 + 0.27 = \underline{87,27 \text{ kwh}}$$

$$\text{Totale energiekosten: } 87,27 \times 0.56 = \underline{\text{€ } 48,87}$$

Vraag 3

Geg:

$$U = 8750 \text{ mV} \quad I = 1.9 \text{ A} \quad t = 1.8 \text{ h}$$

$$1 \text{ kwh} = \text{€ } 0.89$$

Gev:

Energiekosten per week

Form:

$$P = U \times I$$

$$E = P \times t$$

Inv:

$$U = 8750 \text{ mV} \rightarrow 8.75 \text{ V} \quad (/1000)$$

$$P = 8.75 \times 1.9 = \underline{16.63 \text{ W}} \quad (P = U \times I)$$

$$P = 16.63 \text{ W} \rightarrow 0.017 \text{ Kw} \quad (/1000)$$

$$E = 0.017 \times 1.8 = 0.031 \text{ kwh per dag} \quad (E = P \times t)$$

$$E = 0.031 \text{ kwh} \times 7 = \underline{0.217 \text{ kwh per week}}$$

$$\text{Energiekosten: } 0.217 \times \text{€ } 0.89 = \underline{\text{€ } 0.19}$$

Vraag 4

Geg:

$$U = 120 \text{ V} \quad I = 2.1 \text{ A} \quad t = 8 \text{ h en } 49 \text{ min}$$

$$1 \text{ kwh} = \text{€ } 0.89$$

Gev:

Energiekosten per jaar

Form:

$$P = U \times I$$

$$E = P \times t$$

Inv:

$$P = 120 \times 2.1 = 252 \text{ W} \quad (P = U \times I)$$

$$P = 252 \text{ W} \rightarrow 0.252 \text{ Kw} \quad (/1000)$$

$$t = 8 \text{ h } 51 \text{ min} \rightarrow 8.85 \text{ h} \quad (/60)$$

$$E = 0.252 \times 8.85 = 2.23 \text{ kwh per week} \quad (E = P \times t)$$

$$E = 2.23 \times 52 = 115.96 \text{ kwh per jaar}$$

$$\text{Energiekosten: } 115.96 \times \text{€ } 0.89 = \underline{\underline{\text{€ } 103,20}}$$

