

- ① what is the maximum heart rate of a 26 year old female?
- ② calculate the age of sam if his max heart rate is 173 b/min
- ③ If Alex's heart rate is 36 beats/40 seconds, how many times his heart beat in 7.5 hours while he sleeps?

④ 1 calorie = _____ kJ

⑤ convert each unit of energy:

a) 6270 kJ to J

b) 12 MJ to J

c) 920 calories to kJ

d) 2395 kJ to MJ

e) 450 kJ to cal

f) 11 MJ to Cal

⑥ Jacinta bought her lunch which consisted of the following items:

Item	energy (kJ)
Sushi Roll	1272
Anzac biscuit	1000
Reduced fat milk	525

what percentage of the daily intake (8700 kJ) does her lunch represent.

⑦ if swimming for 30 minutes used up 1375 kJ worth of energy, how long would Stacy need to swim for if she consumes a muffin with energy content of 2510 kJ.

⑧ complete:

unit	relationships
microwatt (μW)	1 μW = _____ W = 10 ^{-□} W
milliwatt (mW)	1 mW = _____ W = 10 ^{-□} W
watt (W)	1 W = _____ mW = _____ μW
kilowatt (kW)	1 kW = _____ W
megawatt (MW)	1 MW = _____ kW = _____ W or 10 [□] W
gigawatt (GW)	1 GW = _____ MW = _____ W or 10 [□] W

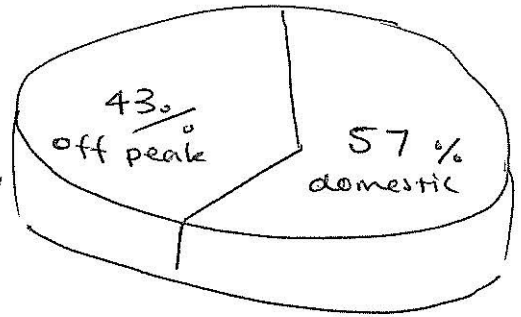
9) Convert:

a) 6540 W to kW

b) 820 000 MW to W

c) 165 200 GW to kW

10) The graph shows the domestic and off peak electricity usage over a 91 day period.



a) If the total usage was 2472 kWh, how many kilowatt hours was off-peak usage?

b) Calculate the cost of:

(i) off peak usage at \$0.17923/kWh

(ii) domestic usage at \$0.52496/kWh

c) What was the average daily cost for domestic usage?

11) Piper uses a 1250W electric lawn mower for 30 mins every fortnight to mow lawns. If electricity is charged at the rate of 32.8735 cents/kWh, calculate the cost of using the lawn mower in a year.

12) Find the cost of a modem on standby, assuming its on 24 hours a day for 365 days for a year, costing 31.9025 cents/kWh.

13) Standby power can account for up to 10% of the electricity usage in a home. The average Australian home uses 7250 kWh per year. Calculate the cost of the standby power for one year if electricity costs 34.3271 cents/kWh.