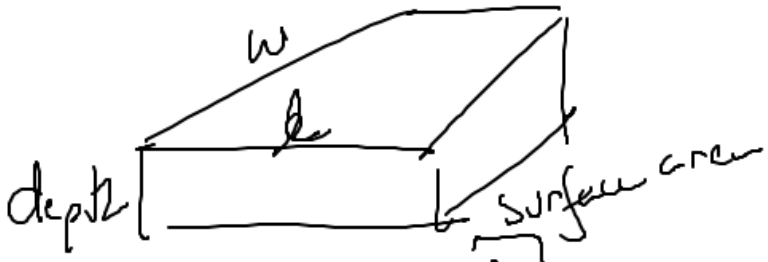
pg 101 QR textbook

Quick Quiz



volume = l·w·depth

volume ft^3 surface area ft^2

$$\frac{ft^3}{ft} \rightarrow ft^2$$

$$\frac{a^3}{a} \rightarrow a^3 a^{-1} = a^{3+(-1)} = a^2$$

1 watt = $\frac{1 \text{ joule}}{\text{sec}}$

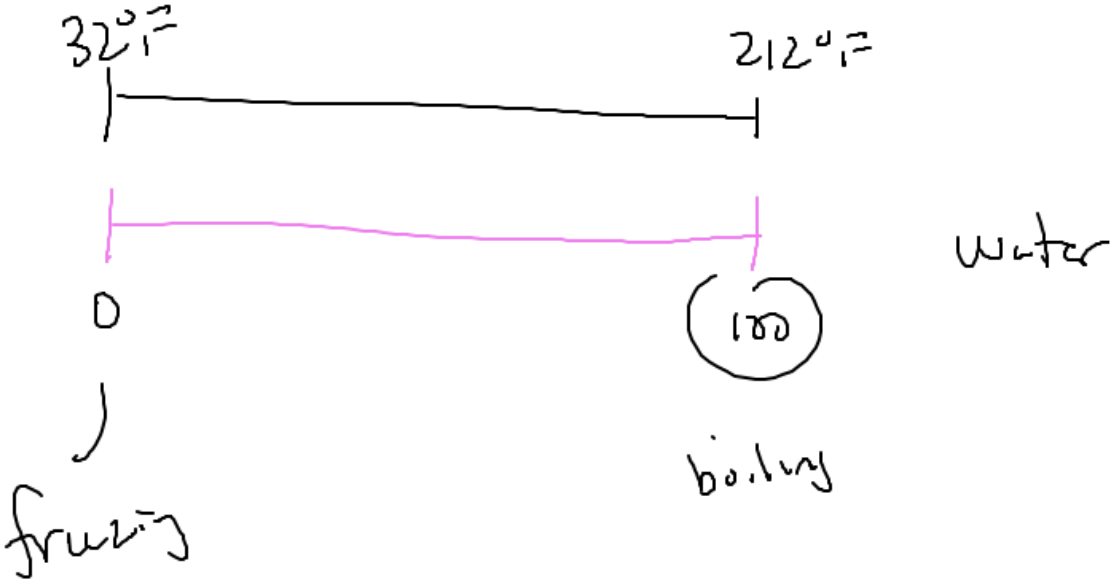
energy

power

100 watts = $100 \left[\frac{j}{sec}\right]$

1 minute of usage: $100 \frac{j}{sec} \times 1 \text{ min} \times \frac{60 \text{ sec}}{1 \text{ min}}$

$= 6000 \text{ [joules]}$


32°F
212°F
water
0
100
freezing
boiling

$300 \frac{mg}{kg \cdot day} \times 30 kg = 9000 \frac{mg}{day}$

$9000 \frac{mg}{day} \times \frac{1}{3} day = 3000 mg$ per 8 hours

$8 \text{ hours} \times \frac{1 \text{ day}}{24 \text{ hours}} = \frac{1}{3} \text{ day}$

$$4\,\text{L} \times \left(.08\,\frac{\text{g}}{100\,\text{mL}} \right) \times \frac{1000\,\text{mL}}{1\,\text{L}} = 3.2\,\text{grams}$$

$$4\,\text{L} \left(\frac{1000\,\text{mL}}{1\,\text{L}} \right) .08 \left[\frac{\text{g}}{100\,\text{mL}} \right] = 3.2\,\text{grams}$$

Software (R, Python)

addition: +

Subtraction: −

division: /

multiplication: *

exponent

Python: ** R: ** or ^