

$$\begin{aligned} \text{a) } 100 \frac{\text{km}}{\text{h}} &= 100 \frac{\cancel{\text{km}}}{\cancel{\text{h}}} \cdot \frac{1000 \cancel{\text{m}}}{1 \cancel{\text{km}}} \cdot \frac{1 \cancel{\text{h}}}{60 \cancel{\text{min}}} \cdot \frac{1 \cancel{\text{min}}}{60 \text{s}} = \\ &= \frac{100 \cdot 1000 \cancel{\text{m}}}{60 \cdot 60 \cancel{\text{s}}} = 27.7 \text{ m/s} \end{aligned}$$

$$\begin{aligned} \text{b) } 200 \frac{\text{m}}{\text{h}} &= 200 \frac{\cancel{\text{m}}}{\cancel{\text{h}}} \cdot \frac{100 \cancel{\text{cm}}}{1 \cancel{\text{m}}} \cdot \frac{1 \cancel{\text{h}}}{60 \cancel{\text{min}}} \cdot \frac{1 \cancel{\text{min}}}{60 \text{s}} = \\ &= \frac{200 \cdot 100 \cancel{\text{cm}}}{60 \cdot 60 \cancel{\text{s}}} = 5.5 \text{ cm/s} \end{aligned}$$

$$\begin{aligned}
 c) \ 25 \text{ cm/min} &= 25 \frac{\text{cm}}{\text{min}} \cdot \frac{1 \text{ m}}{100 \text{ cm}} \cdot \frac{1 \text{ km}}{1000 \text{ m}} \cdot \frac{60 \text{ min}}{1 \text{ h}} = \\
 &= \frac{25 \cdot 60}{100 \cdot 1000} \cdot \frac{\text{km}}{\text{h}} = 0.015 \text{ km/h}
 \end{aligned}$$

$$d) \ 4 \text{ mm/h} = 4 \frac{\text{mm}}{\text{h}} \cdot \frac{1 \text{ cm}}{10 \text{ mm}} \cdot \frac{1 \text{ h}}{60 \text{ min}} = \frac{4}{10 \cdot 60} \cdot \frac{\text{cm}}{\text{min}} = 0.006 \frac{\text{cm}}{\text{min}}$$

$$\begin{aligned} \text{e) } 8.5 \text{ m/s} &= 8.5 \frac{\cancel{\text{m}}}{\cancel{\text{s}}} \cdot \frac{1 \cancel{\text{km}}}{1000 \cancel{\text{m}}} \cdot \frac{60 \cancel{\text{s}}}{1 \cancel{\text{min}}} \cdot \frac{60 \cancel{\text{min}}}{1 \text{h}} = \\ &= \frac{8.5 \cdot 60 \cdot 60}{1000} \cdot \frac{\text{km}}{\text{h}} = 30.6 \text{ km/h} \end{aligned}$$

$$\begin{aligned} \text{f) } 320 \text{ km/h} &= 320 \frac{\cancel{\text{km}}}{\cancel{\text{h}}} \cdot \frac{1000 \cancel{\text{m}}}{1 \cancel{\text{km}}} \cdot \frac{1 \cancel{\text{h}}}{60 \cancel{\text{min}}} \cdot \frac{1 \cancel{\text{min}}}{60 \text{s}} = \\ &= \frac{320 \cdot 1000}{60 \cdot 60} \frac{\text{m}}{\text{s}} = 88.8 \text{ m/s} \end{aligned}$$

$$\begin{aligned} g) 400 \text{ m/s} &= 400 \frac{\cancel{\text{m}}}{\cancel{\text{s}}} \cdot \frac{1 \text{ km}}{1000 \cancel{\text{m}}} \cdot \frac{60 \cancel{\text{s}}}{1 \cancel{\text{min}}} \cdot \frac{60 \cancel{\text{min}}}{1 \text{ h}} = \\ &= \frac{400 \cdot 60 \cdot 60}{1000} \frac{\text{km}}{\text{h}} = 1440 \text{ km/h} \end{aligned}$$

$$\begin{aligned} h) 225 \text{ m/s} &= 225 \cdot \frac{\cancel{\text{m}}}{\cancel{\text{s}}} \cdot \frac{1 \text{ km}}{1000 \cancel{\text{m}}} \cdot \frac{60 \cancel{\text{s}}}{1 \cancel{\text{min}}} \cdot \frac{60 \cancel{\text{min}}}{1 \text{ h}} = \\ &= \frac{225 \cdot 60 \cdot 60}{1000} \frac{\text{km}}{\text{h}} = 810 \text{ km/h} \end{aligned}$$

$$i) 10 \text{ m/s} = 10 \frac{\text{m}}{\text{s}} \cdot \frac{1 \text{ km}}{1000 \text{ m}} = \frac{10}{1000} \frac{\text{km}}{\text{s}} = 0.01 \text{ km/s}$$

$$j) 20 \text{ m/s} = 20 \frac{\text{m}}{\text{s}} \cdot \frac{1 \text{ km}}{1000 \text{ m}} \cdot \frac{60 \text{ s}}{1 \text{ min}} = \frac{20 \cdot 60}{1000} \frac{\text{km}}{\text{min}} = 1.2 \frac{\text{km}}{\text{min}}$$

$$k) 75 \text{ cm/min} = 75 \frac{\text{cm}}{\text{min}} \cdot \frac{60 \text{ min}}{1 \text{ h}} \cdot \frac{1 \text{ m}}{100 \text{ cm}} \cdot \frac{1 \text{ km}}{1000 \text{ m}} = \frac{75 \cdot 60}{100 \cdot 1000} \frac{\text{km}}{\text{h}} = 0.045 \text{ km/h}$$

$$\begin{aligned}
 l) \quad 210 \text{ mm/s} &= 210 \cdot \frac{\cancel{\text{mm}}}{\cancel{\text{s}}} \cdot \frac{1 \cancel{\text{m}}}{1000 \cancel{\text{mm}}} \cdot \frac{1 \cancel{\text{dam}}}{10 \cancel{\text{m}}} \cdot \frac{60 \cancel{\text{s}}}{1 \cancel{\text{min}}} \cdot \frac{60 \cancel{\text{min}}}{1 \cancel{\text{h}}} \\
 &= \frac{210 \cdot 60 \cdot 60}{1000 \cdot 10 \cdot 60 \cdot 60} \cdot \frac{\text{dam}}{\text{h}} = 7.56 \text{ dam/h}
 \end{aligned}$$

$$\begin{aligned}
 m) \quad 0.0003 \text{ m/s} &= 0.0003 \cdot \frac{\cancel{\text{m}}}{\cancel{\text{s}}} \cdot \frac{1 \cancel{\text{km}}}{1000 \cancel{\text{m}}} \cdot \frac{60 \cancel{\text{s}}}{1 \cancel{\text{min}}} \cdot \frac{60 \cancel{\text{min}}}{1 \cancel{\text{h}}} = \\
 &= \frac{0.0003 \cdot 60 \cdot 60}{1000} \cdot \frac{\text{km}}{\text{h}} = 0.00108 \text{ km/h} = \\
 &= 1.08 \cdot 10^{-3} \text{ km/h}
 \end{aligned}$$

$$\begin{aligned} \text{n) } 0.3 \text{ m/s} &= 0.3 \frac{\cancel{\text{m}}}{\cancel{\text{s}}} \cdot \frac{1 \text{ km}}{1000 \cancel{\text{m}}} \cdot \frac{60 \cancel{\text{s}}}{1 \cancel{\text{min}}} \cdot \frac{60 \cancel{\text{min}}}{1 \text{ h}} = \\ &= \frac{0.3 \cdot 60 \cdot 60}{1000} \frac{\text{km}}{\text{h}} = 1.08 \text{ km/h} \end{aligned}$$

$$\begin{aligned} \text{o) } 2 \text{ m/s} &= 2 \frac{\cancel{\text{m}}}{\cancel{\text{s}}} \cdot \frac{1 \text{ km}}{1000 \cancel{\text{m}}} \cdot \frac{60 \cancel{\text{s}}}{1 \cancel{\text{min}}} \cdot \frac{60 \cancel{\text{min}}}{1 \text{ h}} = \\ &= \frac{2 \cdot 60 \cdot 60}{1000} \cdot \frac{\text{km}}{\text{h}} = 7.2 \text{ km/h} \end{aligned}$$

$$\begin{aligned} p) 7 \text{ m/s} &= 7 \frac{\cancel{\text{m}}}{\cancel{\text{s}}} \cdot \frac{1 \cancel{\text{km}}}{1000 \cancel{\text{m}}} \cdot \frac{60 \cancel{\text{s}}}{1 \cancel{\text{min}}} \cdot \frac{60 \cancel{\text{min}}}{1 \cancel{\text{h}}} = \\ &= \frac{7 \cdot 60 \cdot 60}{1000} \frac{\text{km}}{\text{h}} = 25.2 \text{ km/h} \end{aligned}$$

$$\begin{aligned} q) 15 \text{ m/s} &= 15 \frac{\cancel{\text{m}}}{\cancel{\text{s}}} \cdot \frac{1 \cancel{\text{km}}}{1000 \cancel{\text{m}}} \cdot \frac{60 \cancel{\text{s}}}{1 \cancel{\text{min}}} \cdot \frac{60 \cancel{\text{min}}}{1 \cancel{\text{h}}} = \\ &= \frac{15 \cdot 60 \cdot 60}{1000} \frac{\text{km}}{\text{h}} = 54 \text{ km/h} \end{aligned}$$

$$\begin{aligned} r) 22.2 \text{ m/s} &= 22.2 \frac{\text{m}}{\text{s}} \cdot \frac{1 \text{ km}}{1000 \text{ m}} \cdot \frac{60 \text{ s}}{1 \text{ min}} \cdot \frac{60 \text{ min}}{1 \text{ h}} = \\ &= \frac{22.2 \cdot 60 \cdot 60}{1000} \cdot \frac{\text{km}}{\text{h}} = 79.92 \text{ km/h} \end{aligned}$$

$$\begin{aligned} s) 25 \text{ dam/s} &= 25 \frac{\text{dam}}{\text{s}} \cdot \frac{1 \text{ km}}{10 \text{ dam}} \cdot \frac{60 \text{ s}}{1 \text{ min}} \cdot \frac{60 \text{ min}}{1 \text{ h}} = \\ &= \frac{25 \cdot 60 \cdot 60}{10} \cdot \frac{\text{km}}{\text{h}} = 9000 \text{ km/h} \end{aligned}$$