

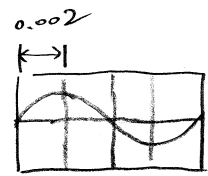
対策④

5 (3) $340 \times 20 \div 2 = \underline{3400 \text{ m}}$
往復

(5) Aの食塩 25g
 Bの食塩 $200 \times \frac{12}{100} = 24\text{g}$ } 合計 $25 + 24 = 49\text{g}$

食塩水合計 $\underbrace{100}_{\text{A}} + 25 + \underbrace{200}_{\text{B}} = 325\text{g}$

濃度 $\frac{49}{325} \times 100 = 15.1\% \dots \underline{15.1\%}$

6 (3) 
 (振動数 = 振動の回数 ÷ 時間)
 ← 1回の振動にかかる時間が0.008秒だから

$$\begin{aligned} 1 \div 0.008 &= 1 \div \frac{8}{1000} \\ &= 1 \times \frac{1000}{8} \\ &= \underline{125 \text{ Hz}} \end{aligned}$$

7 (1) $1500 \text{ m/s} \times 2.1 \text{ 秒} \div 2 = \underline{1575 \text{ m}} \rightarrow \textcircled{3}$
往復

14 (1) Q-P $33\text{分}20 - 32\text{分}49\text{秒} = \underline{31\text{秒}} \rightarrow \textcircled{3}$

(2) A~Bの距離 $198.4 - 83.2 = 115.2 \text{ km}$
 P波到着時刻の差 $32\text{分}49\text{秒} - 32\text{分}31\text{秒} = 18\text{秒}$
 $115.2 \div 18 = 6.4 \div 2$
 $= \underline{6.4 \text{ km/s}} \rightarrow \textcircled{3}$

(3) A-B間の小波到着時刻の差

$$\begin{aligned} 33\text{分}20\text{秒} - 32\text{分}44\text{秒} &= 36\text{秒} \leftarrow \left(\begin{array}{l} \text{Bの2倍かかるとする} \\ \text{速度が}\frac{1}{2} \rightarrow \textcircled{2} \end{array} \right) \\ 115.2 \div 36 &= 12.8 \div 4 \\ &= 3.2 \text{ km/s} \rightarrow \textcircled{2} \end{aligned}$$

(4) (A) $83.2 \div 6.4 = 20.8 \div 1.6$
 $= 5.2 \div 0.4$
 $= 5.2 \times \frac{10}{4}$
 $= 13 \text{ 秒前}$

$$\begin{aligned} 10\text{時}32\text{分}31\text{秒} - 13\text{秒} \\ = 10\text{時}32\text{分}18\text{秒} \rightarrow \textcircled{2} \end{aligned}$$

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(2) 硝酸カリウム 80°C の溶解度 168.8 g
60°C " " 109.2 g) 差
 $\underline{59.6 \text{ g} \rightarrow \textcircled{2}}$

(3) 硝酸カリウム 60°C 100g の溶解度 109.2 g
200g " 218.4 g $\rightarrow \times 2$
 $\underline{250 - 218.4 = 31.6 \text{ g} \rightarrow \textcircled{1}}$

(4) 硝酸カリウム 20°C の溶解度 31.6 g
 $\underline{50 - 31.6 = 18.4 \text{ g} \rightarrow \textcircled{2}}$

19. ② 水酸化ナトリウムを x g 加入する

$$\frac{x}{300+x} \times 100 = 2$$

$$100x = 2(300+x)$$

$$100x = 600 + 2x$$

$$98x = 600$$

$$x = \frac{600}{98} \approx \frac{300}{49}$$

$$x = 6.12$$

$$\underline{A. 6.1 \text{ g}}$$

③ 砂糖 = $800 \times \frac{25}{100} = \underline{200 \text{ g}}$ 水 = $800 - 200 = \underline{600 \text{ g}}$

④ 加入の水の量を x g とする

$$\text{食塩の量} = 400 \times \frac{12}{100} = 48 \text{ g}$$

$$\frac{48}{400+x} \times 100 = 10$$

$$4800 = 10(400+x)$$

$$4800 = 4000 + 10x$$

$$800 = 10x$$

$$x = 80$$

$$\underline{A. 80 \text{ g}}$$

⑤ 蒸発させる水の量を x g とする

$$\text{砂糖の量} = 300 \times \frac{15}{100} = 45 \text{ g}$$

$$\frac{45}{300-x} \times 100 = 36$$

$$4500 = 36(300-x)$$

$$4500 = 10800 - 36x$$

$$36x = 10800 - 4500$$

$$36x = 6300$$

$$x = \underline{175 \text{ g}}$$

$$\textcircled{6} \quad \text{密度} = \frac{\text{質量 (g)}}{\text{体積 (cm}^3\text{)}} \quad \begin{cases} \text{質量} = \text{体積} \times \text{密度} \\ \text{体積} = \frac{\text{質量}}{\text{密度}} \end{cases}$$

$$2.24 \text{ kg} = 2240 \text{ g}$$

$$\text{体積} = \frac{2240}{8.96} = \frac{224000}{896} = \frac{56000}{224} = \frac{14000}{56} = \frac{2000}{8} \\ = \underline{250 \text{ cm}^3}$$

$$\textcircled{7} \quad \text{質量} = 300 \times 0.92 \\ = \underline{276 \text{ g}}$$

$$\textcircled{8} \quad \frac{800}{4 \times 2 \times 2} = \frac{100}{8} = \underline{12.5 \text{ g/cm}^3}$$