nivelando - resolução

⟹ unidades de medida

km hm dam m dm cm mm

← ÷ | × →

01. a) 15 cm → m

$\frac{15}{10^2} = 0{,}15$ m

b) 5 m → cm

$5 \cdot 10^2 = 500$ cm

c) 3 km → m

$3 \cdot 10^3 = 3000$ m

d) 3 hm → dm

$3 \cdot 10^3 \rightarrow 3000$ dm

e) 70 mm → dam

$\frac{70}{10^4} = 70 \cdot 10^{-4} = 0{,}007$ dam

f) 0,1 km → cm

$0{,}1 \cdot 10^5 = 10\,000$ cm

02. a) 2,5 mg → g

$\frac{2{,}5}{10^3} = 0{,}0025$ g

kg hg dag g dg cg mg

← ÷ | × →

b) 9,56 dg → mg

$9{,}56 \cdot 10^2 = 956$ mg

c) 0,054 hg → g

$0{,}054 \cdot 10^2 = 5{,}4$ g

d) 2,45 kg → hg

$2{,}45 \cdot 10 = 24{,}5$ hg

$\frac{2,6}{10^3} = 0,0026 kg$

Km^3 hm^3 dam^3 m^3 dm^3 cm^3 mm^3

← ÷ 1000 10^3 | × 1000 10^3 →

03. a) $8,132\ Km^3 \rightarrow hm^3$

$8,132 \cdot 10^3 = 8132\ hm^3$

b) $180\ hm^3 \rightarrow Km^3$

$\frac{180}{10^3} = 0,18\ Km^3$

c) $5\ cm^3 \rightarrow m^3$

$\frac{5}{10^6} = 0,000005\ m^3$

d) $78,5\ m^3 \rightarrow Km^3$

$\frac{78,5}{10^9} = 78,5 \cdot 10^{-9}\ Km^3$

e) $12\ m^3 \rightarrow cm^3$

$12 \cdot 10^6 = 12000000\ cm^3$

f) $139\ mm^3 \rightarrow m^3$

$\frac{139}{10^9} = 13,8 \cdot 10^{-8}\ m^3$

Km^2 ham^2 dam^2 m^2 dm^2 cm^2 mm^2

← ÷ 100 | × 100 →

04. a) $6\ m^2 \rightarrow dm^2$

$6 \cdot 100 = 600\ dm^2$

b) $50\ cm^2 \rightarrow mm^2$

$50 \cdot 100 = 5000\ mm^2$

c) $3,652\ m^2 \rightarrow mm^2$

$3,652 \cdot 10^6 = 3652000\ mm^2$

d) $0,95\ dm^2 \rightarrow mm^2$

$0,95 \cdot 10^4 = 9500\ mm^2$

e) $500\ dm^2 \rightarrow m^2$

$\frac{500}{100} = 0,5\ m^2$

05. $4\,m^3 \rightarrow cm^3$ $\quad cm^3 \rightarrow ml$

$4 \cdot 10^6 = 4000\,000\ ml$

4000 caixas → 4000 000

1 → x

$x = \frac{4000\,000}{4000} = 1000\ ml$

(E)

06. $\frac{100}{1000\,000} = 100 \cdot 10^{-6} = 1 \cdot 10^{-4}$

(C)

07. 1 PÉ → 12 POLEGADAS

443 PÉ → 5316 POLEGADAS

1 POLEGADA → 2,54 cm

5316 → 13502,64 cm

13502,64 cm ≅ 135 m

(D)

08.

$3{,}10 - 3 = 0{,}10$ mm

$3{,}021 - 3 = 0{,}021$ m

$3{,}06 - 2{,}96 = 0{,}04$ mm

$3{,}996 - 2{,}099 = 0{,}901$ mm

$3{,}07 - 3 = 0{,}07$ mm

(C)

09. $V = \frac{\Delta S}{\Delta t}$

1 hora → 60 minutos

1 minuto → 60 s

60 min → 3600 s

1 hora → 3600 s

1 hora → 3600 s

x → 84 s

$x = \frac{84}{3600}$ h

$V = \frac{2{,}1\ km}{\frac{84}{3600}\ h}$

$V = 2{,}1 \cdot \frac{3600}{84}$

1 min + 24 segundos =

= 60 + 24 = 84 segundos

$V = \frac{7560}{84}$

C

$v = 90\ km/h$

10. $20000\ l$ $\qquad l \to dm^3$

$20000\ dm^3 \to 20\ m^3$

$25000\ dm^3 \to 25\ m^3$

$20 + 25 = 45\ m^3$

$45 - 30 = 15\ m^3$

A

11. 30 minutos $\to \frac{1}{2}$ hora

24 horas $\to 48$ intervalos de 30 min

1 intervalo de 30 min $\to 400$ ml

$48 \to x$

$x = 19200$ ml $\to 19{,}2\ l$

B

12. Calcário $\to 180\ g$ por m^2

NPK $\to 130\ g$ por $10\ m^2$

$+ 30\ g$ a cada muda

$km^2 \xrightarrow{\times 100} ha\ (hm^2) \xrightarrow{\times 100} dam^2 \to m^2 \to dm^2 \to cm^2 \to mm^2$

$1\ ha \to 1\ hm^2 \to 10000\ m^2$

$\frac{2}{5} \cdot 10000 = 4000\ m^2$

$180 \cdot 4000\ m^2 = 720000\ g = 720\ kg$ de calcário

$130 \cdot \frac{4000}{10} = 62000 = 52\ kg$ de NPK

$30 \cdot 13000 \cdot \frac{2}{5} = 156\ kg$

$156 + 56 = 208\ kg \to 210$ (sacos de $10kg$)

$10\ kg \to 65$ reais

$210\ kg \to x$

$x = 1365$

$720\ kg \to x$

$10\ kg \to 15$ reais

$x = 1080$

$1365 + 1080 = 2445$

B

13. $40 \cdot 3 = 120$ minutos

$120 \overline{)60}$

2 horas + 3 minutos

↳ cliente agora em atendimento

A

14. $1000\,ml \rightarrow 480\,min$ $\quad 8h \rightarrow 8 \cdot 60 = 480\,min$

$x \rightarrow 375$ $\quad 6h\,15min \rightarrow (6 \cdot 60) + 15 = 360 + 15 = 375$

$x = \frac{375000}{480} = 781{,}25\,ml$

E

15. $\frac{x}{y} = \frac{2}{5}$ $\quad 2y = 5x$

$x + y = 14 \cdot (2)$

$2x + 2y = 28$

$2x + 5x = 28$

$7x = 28$

$x = 4$ $\quad y = 10$

$10 - 4 = 6\,m^3 = 6000\,l$

B