

Calculate the following dosages using the formula method:

1.



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ORDER: Apo-ibuprofen 800 mg po qid

D/H X Q = x

800 mg/400 mg X 1 tab = x

2 tab = x

CHECK: D:X = H:Q

800:2 = 400:1

2X400 = 800X1

800=800

2.

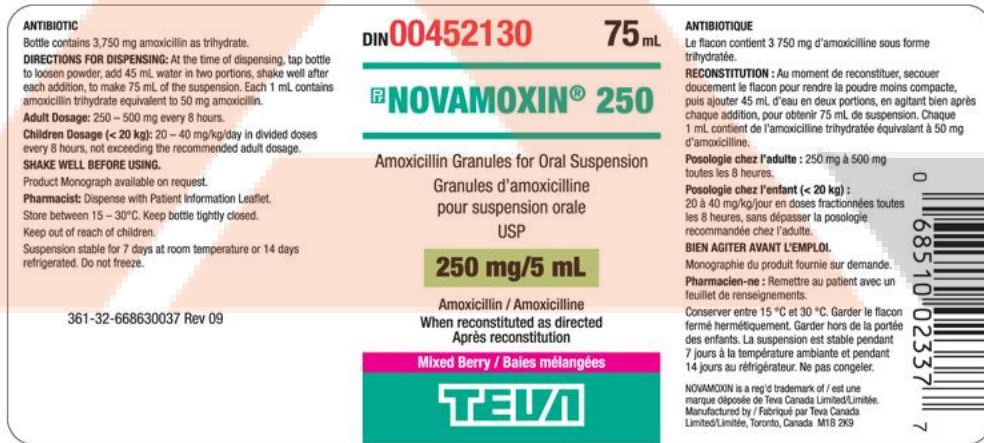


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ORDER: Lipitor 20 mg po daily hs

D/H x Q = x
 20mg/10mg x 1tab = x
 2 tab = x

CHECK
 D:X = H:Q
 20:2=10:1
 20x1=10x2
 20=20
 3.

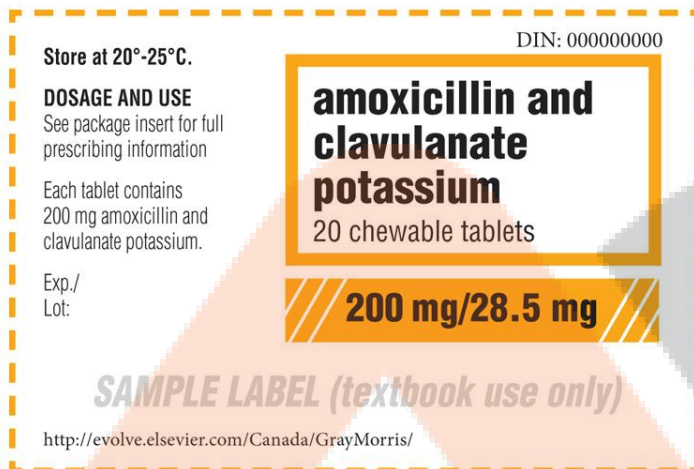


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ORDER: Novamoxin 500 mg q8h times 3 days
 D/H x Q = x
 500mg/250mg x 5mL = x
 10 mL = x

D:X=H:Q
500:10=250:5
500x5 = 250x10
2500 = 2500

4.



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Order: Amoxicillin and clavulanate potassium chewable 200 mg po qid times 4 days

D/H x Q = x
200mg/200mg x 1 tablet = x
1 tablet = x

D:x = H:Q
200:1 = 200:1
200 x 1 = 200 x 1
200=200

5. The physician orders heparin 45 000 units IV in 500 mL D5W. The automated dispensing unit (ADU) stocks 10 000 units/10 mL vials. How many mL would you add to the Intravenous?

$$\begin{aligned} D/H \times Q &= x \\ 45\,000 \text{ units} / 10\,000 \text{ units} \times 10 \text{ mL} &= x \\ 45 \text{ mL} &= x \end{aligned}$$

$$\begin{aligned} D:x &= H:Q \\ 45\,000:45 &= 10\,000:10 \\ 45\,000 \times 10 &= 45 \times 10\,000 \\ 450\,000 &= 450\,000 \end{aligned}$$

6. The ER physician orders digoxin 110 mcg IV q12h for an adolescent patient with uncontrolled atrial fibrillation. The vial in the automated dispensing unit (ADU) is labelled "digoxin 1 mg/mL". ~~The nurse draws up 4.4 mL. Is this correct?~~

$$\begin{aligned} D/H \times Q &= x \\ 110 \text{ mcg} / 1 \text{ mg} &\text{ WRONG} \\ 110 \text{ mcg} / 1000 \text{ mcg} \times 1 \text{ mL} &= x \\ 0.11 \text{ mL} &= x \end{aligned}$$

No, she is not correct

$$\begin{aligned} D:x &= H:Q \\ 110:0.11 &= 1000 \times 1 \\ 110 \times 1 &= 0.11 \times 1000 \\ 110 &= 110 \end{aligned}$$

7. A patient is ordered Diphenhydramine 35 mg IM q6H prn for itching. It is available in 50 mg/mL. How many mL per dose?

$$\begin{aligned} D/H \times Q &= x \\ 35\text{mg}/50\text{mg} \times 1\text{mL} &= x \\ 0.7 \text{ mL} \end{aligned}$$

$$\begin{aligned} D:X &= H:Q \\ 35:0.7 &= 50:1 \\ 35 \times 1 &= 0.7 \times 50 \\ 35 &= 35 \end{aligned}$$



8. A patient is prescribed ondansetron (Zofran) 3mg IV for post-operative nausea and vomiting. The medication is available in 2 mg per mL. How many mL should the nurse administer?

$$\begin{aligned}D/H \times Q &= x \\3\text{mg}/2\text{mg} \times 1\text{mL} &= x \\1.5\text{mL} &= x\end{aligned}$$

$$\begin{aligned}D:X &= H:Q \\3:1.5 &= 2:1 \\3 \times 1 &= 1.5 \times 2 \\3 &= 3\end{aligned}$$

9. You dilute 10 mg/mL of Morphine in 9 mL of normal saline for a total of 10 mLs. You want to administer 2.5 mg. How many mLs do you administer?

$$\begin{aligned}D/H \times Q &= x \\2.5\text{mg}/10\text{mg} \times 10\text{mL} &= x \\2.5\text{ mL} &= x\end{aligned}$$

$$\begin{aligned}D:X &= H:Q \\2.5:2.5 &= 10:10 \\2.5 \times 10 &= 2.5 \times 10 \\25 &= 25\end{aligned}$$