NURSING I

MEDICATION AND I.V. CALCULATION PRACTICE EVALUATION #1

1. Sara Lee has gastritis. She is to have gr. 1/6 of a medication. Available you have gr. 1/4 / mL. How many mL will you administer?

2. Mike Duchex is to have (dr.) 3 of medication. How many mL is this?

3. You are to give Taun Wae 25 mg of a medication. Available you have a vial of powdered medication labeled 0.5 g. Directions say to add 10 mL of sterile solution. How many mL will you administer?

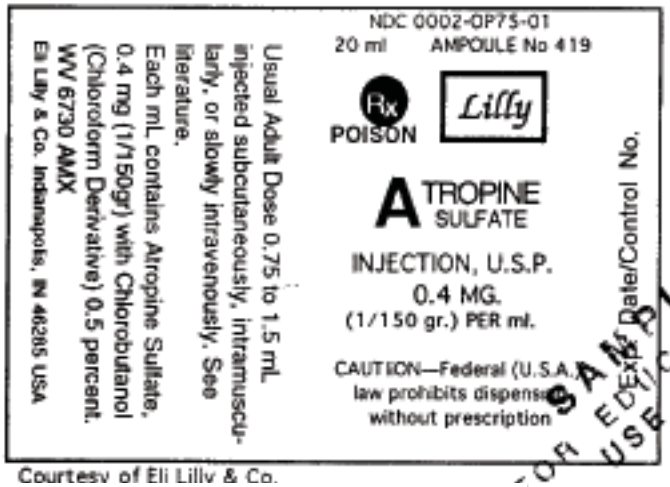
4. Daphne Fowl is to have 2,000 mL of I.V. fluid over the next 18 hrs. Calculate the mL/Hr. flow rate.

5. Kinda Cute is to have 500 mL of D5W with KCL 20 mEq. How many mL of KCL will you add to the 500 mL bag?

Potassium Chloride (KCL) 20mEq per 10mL (2mEq per mL)

6. You come on duty at 7 a.m. and your client's continuous I.V. of 1000 mL D5W has a TBA of 400 mL. Considering that it was started at 3 a.m. at a rate of 125 mL/hr, is the I.V. on time, behind, or ahead?

7. Carrye On is to have gr 1/150 of Atropine. How many mL will you administer?



Courtesy of Eli Lilly & Co.

8. Ordered: 120 mg of medication
Available: Vial of powdered medication labeled 5 g. Directions on the label read, add 10 mL of sterile solution to yield 500 mg/mL. How many mL will you administer?

9. Willa Tarson is to have 750 mL of D5W I.V. It is to infuse in 6 hrs. and the drop factor is 60. Calculate the gtt/min flow rate.

10. Ordered: V-Cillin K 500 mg q6hr p.o. How many mL will you administer?

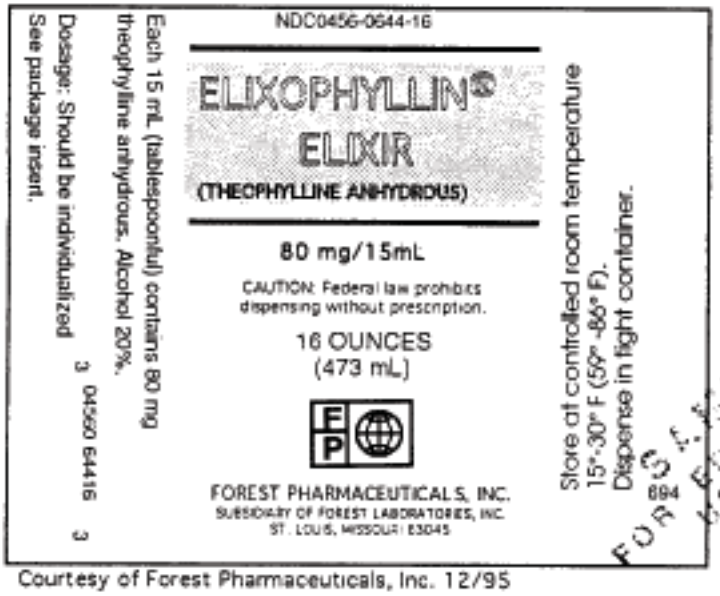
Courtesy of Eli Lilly & Co.

11. Ordered: Demerol 30 mg
Available: Demerol 50 mg/mL
How many mL will you administer?

12. How many minims of Demerol will you administer?

13. Ordered: 0.5 g of medication
Available: 125 mg/mL
How many mL will you administer?

14. Ordered: Elixophyllin Elixir 150 mg p.o. How many mL will you administer?



Courtesy of Forest Pharmaceuticals, Inc. 12/95

15. Deb Land is to have 1,000 mL D5W 1/2NS I.V. It is to infuse in 8 hrs. using a micro drop. Calculate the gtt/min flow rate.

16. At 11 p.m. you are checking the TBAs on your clients. Mr. Black has an I.V. of 1000 mL D5W infusing at 70 mL/hr. It was started at 4 p.m. Assuming it runs on time, what will be your TBA?

17. Give Annie Dote gr 30 of medication. Available you have 0.75 g/mL. How many mL will you administer?

18. Lee Keister is to have a 50 mL of medication by I.V. piggyback. It is to infuse in 30 minutes. The drop factor is 15. Calculate the gtt/min. flow rate.

19. Merry Heartly is to have Lanoxin 0.25 mg. How many tablets will you administer?

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20. Tom Beam is to have an antibiotic q12hr X 12 doses. His first dose is at 9 a.m., 4/10. When will he receive his last dose? (Time and date)

Calculate the following drips per minute (gtt/min) flow rates. Utilizing the following two labels, calculate each I.V. using both drop factors.

(a)

Courtesy of Baxter Healthcare

(b)

Courtesy of Baxter Healthcare

Ordered: 500 mL D5W in 6 hr.

21. Macro/regular Drop (a) _____

22. Micro Drop (b) _____

Ordered: 750 mL D5W to infuse at 100 mL/hr.

23. Macro/regular Drop (a) _____

24. Micro Drop (b) _____

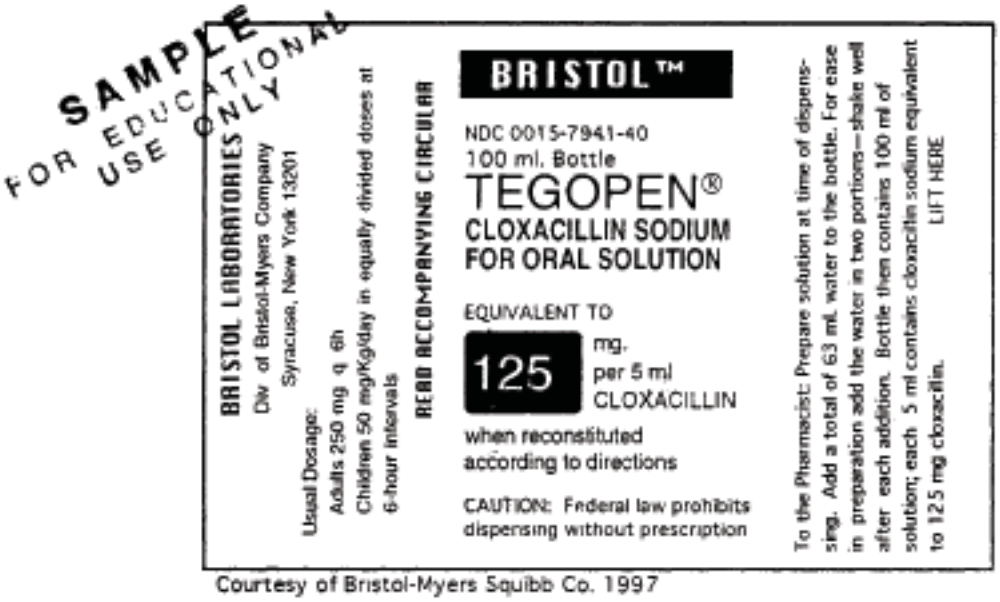
25. Doctor Smith has ordered 35,000 units of Heparin in 500 mL D5W to infuse at 20 mL/hr. How many u/hr will be receive?

26. An I.V. of 500 mL .9% N.S. with 50 u of regular insulin is infusing at 10 u/hr, How many mL/hr is he receiving?

27. Sall is to have a medication of 3 mg/kg of body weight. Sall weighs 25 kg. How many mg of medication can she receive?

28. Bob weighs 150 #. He is to have 1 mg of medication per kg of body weight. How many mg of medication will he receive?

Look at the following label and answer questions 29-35.



Courtesy of Bristol-Myers Squibb Co. 1997

29. What is the trade name?

30. What is the generic name?

31. What form does the medication come in?

32. How much liquid do you add?

33. What is the total amount of drug in the bottle?

34. What is the unit dose?

35. By What route(s) may the medication be administered?

Nursing I
Evaluation 1

1. $\frac{1/6gr \times 1ml}{1 \quad 1/4gr} = 0.66 = 0.7ml$

2. $\frac{3dr \times 4ml}{1 \quad 1dr} = 12ml$

3. $\frac{25mg \times 10ml \times 1G}{1 \quad 0.5G \quad 1{,}000mg} = 0.5ml$

4. $\frac{2000ml}{18hrs} = 111.1 = 111ml/hr$

5. $\frac{20mEq \times 1ml}{1 \quad 2mEq} = 10ml$

6. Ahead

7. $\frac{1/150gr \times 1ml}{1 \quad 1/150gr} = 1ml$

8. $\frac{120mg \times 1ml}{1 \quad 500mg} = 0.24 = 0.2ml$

9. $\frac{750ml \times 60gtt \times 1hr}{6hr \quad 1ml \quad 60min} = 125gtt/min$

10. $\frac{500mg \times 5ml}{1 \quad 125mg} = 20ml$

11. $\frac{30mg \times 1ml}{1 \quad 50mg} = 0.6ml$

12. $0.6ml \times 15 = 9minims$

13. $\frac{0.5G \times 1ml \times 1{,}000mg}{1 \quad 125mg \quad 1G} = 4ml$

14. $\frac{150\text{mg}}{1} \times \frac{15\text{ml}}{80\text{mg}} = 28.13 = 28.1\text{ml}$

15. $\frac{1{,}000\text{ml}}{8\text{hr}} \times \frac{60\text{gtt}}{1\text{ml}} \times \frac{1\text{hr}}{60\text{min}} = 125\text{gtt/min}$

16. 510ml

17. $\frac{30\text{gr}}{1} \times \frac{1\text{ml}}{0.75\text{G}} \times \frac{1\text{G}}{15\text{gr}} = 2.66 = 2.7\text{ml}$

18. $\frac{50\text{ml}}{30\text{min}} \times \frac{15\text{gtt}}{1\text{ml}} = 25\text{gtt/min}$

19. $\frac{0.25\text{mg}}{1} \times \frac{1\text{tab}}{0.125\text{mg}} = 2\text{tab}$

20. 9PM on 4/15

21. $\frac{500\text{ml}}{6\text{hr}} \times \frac{10\text{gtt}}{1\text{ml}} \times \frac{1\text{hr}}{60\text{min}} = 13.8 = 14\text{gtt/min}$

22. $\frac{500\text{ml}}{6\text{hr}} \times \frac{60\text{gtt}}{1\text{ml}} \times \frac{1\text{hr}}{60\text{min}} = 83.3 = 83\text{gtt/min}$

23. $\frac{100\text{ml}}{1\text{hr}} \times \frac{10\text{gtt}}{1\text{ml}} \times \frac{1\text{hr}}{60\text{min}} = 16.6 = 17\text{gtt/min}$

24. $\frac{100\text{ml}}{1\text{hr}} \times \frac{60\text{gtt}}{1\text{ml}} \times \frac{1\text{hr}}{60\text{min}} = 100\text{gtt/min}$

25. $\frac{20\text{ml}}{1\text{hr}} \times \frac{35{,}000\text{U}}{500\text{ml}} = 1{,}400\text{U/hr}$

26. $\frac{10\text{U}}{1\text{hr}} \times \frac{500\text{ml}}{50\text{U}} = 100\text{ml/hr}$

27. $\frac{3\text{mg}}{1\text{ Kg}} \times \frac{25\text{kg}}{1} = 75\text{mg}$

28. $\frac{1mg}{1Kg} \times \frac{150lbs}{1} \times \frac{1Kg}{2.2lbs} = 68.18 = 68.2mg$

29. Tegopen

30. Cloxacillin Sodium

31. Powder

32. 63ml

33. 2,500mg

34. 125mg/5ml

35. Orally