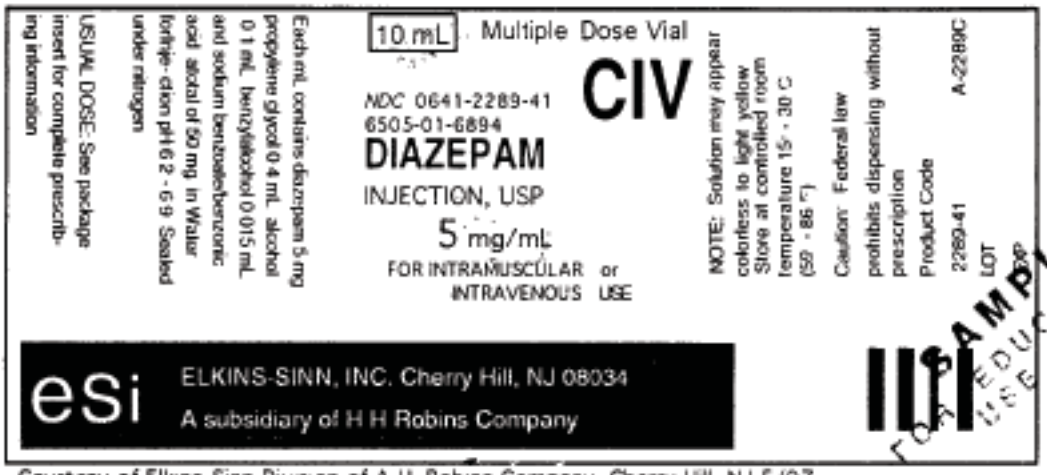
NURSING I

MEDICATION AND I.V. CALCULATION
PRACTICAL EVALUATION #2

DIRECTIONS: This material is to assist you in preparing for your Medication Calculation Exam. Do your calculations without help from anyone. If you will do this, you will know those calculations you can do well and those that require further study.

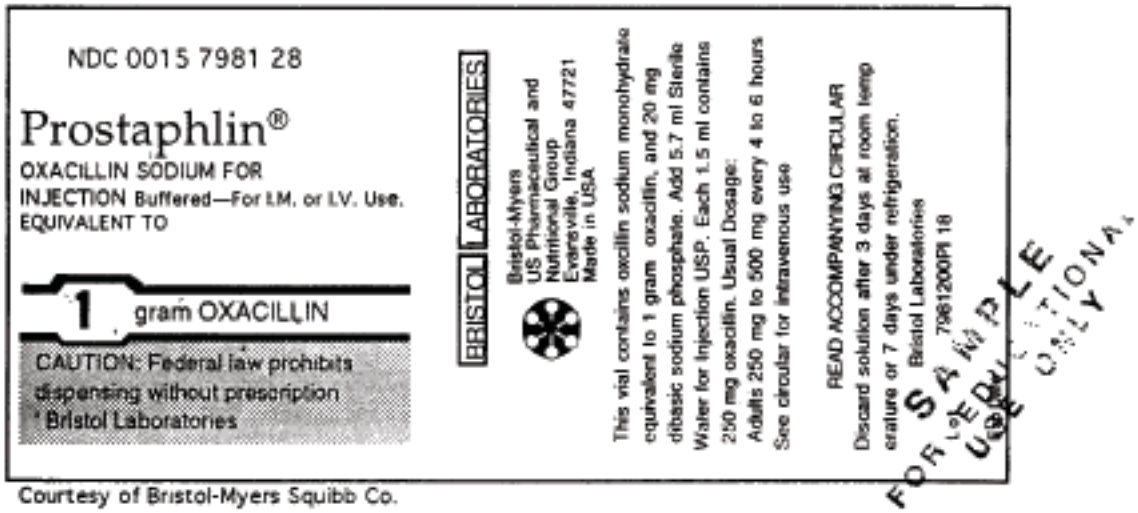
1. Ordered: Diazepam 7.5 mg I.M. How many mL will you give your client?



Courtesy of Elkins-Sinn Division of A.H. Robins Company, Cherry Hill, NJ 5/97

2. Ordered: Atropine gr 1/100 S.C. Available you have Atropine 1 mg/1 mL. How many mL will you administer?

3. Ordered: Prostaphlin 0.25 g I.M. q6h. How many mL will you administer?



Courtesy of Bristol-Myers Squibb Co.

4. You come on duty at 3 p.m. and your client's I.V. of 1000 mL D5W has a TBA of 500 mL. Considering that it was started at 11 a.m. at a rate of 75 mL/hr, is the I.V. on time, behind, or ahead?

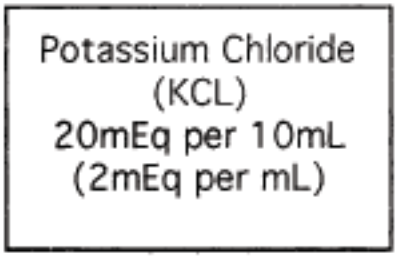
5. Ordered: Duracillin A.S. 250,000 u I.M. How many mL will you administer?

Courtesy of Eli Lilly & Co.

6. Sara Smith is to have 2,500 mL D5W I.V. over the next 24 hours. Calculate the mL/hr flow rate.

7. Marvin Henry is to have Ampicillin 500 mg capsules q6 hr x 3 days. His first dose is at 8 p.m., 3/7. Give the date and time of his last dose.

8. Max Baker is to have 500 mL D5W with 15 mEq KCL. How many mL KCL will you add to the I.V.?

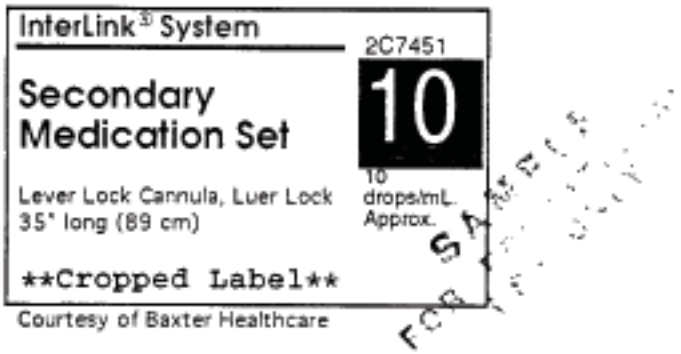


9. Thomas Bean is to receive 2 drams of a medication. How many mL will he receive?

10. Ordered: gr 1/300 of a medication
Available: gr 1/200/mL
How many mL will you administer? How many minims?

Calculate the drops per minute (gtt/min) flow rates utilizing the following two labels.

(a)



(b)

Order: 1,000 mL D5 1/2 N/S in 12 hr.

11. Macro/regular drop (a) _____

12. Micro drop (b) _____

Order: 500 mL D5W in 8 hr.

13. Macro/regular drop (a) _____

14. Micro drop (b) _____

Order: 1,000 mL 0.9 N.S. at 125 mL/hr

15. Macro/regular drop (a) _____

16. Micro drop (b) _ _____

Order: 100 mL Piggy back in 50 min.

17. Macro/regular drop (a) _____

18. Micro drop (b) _____

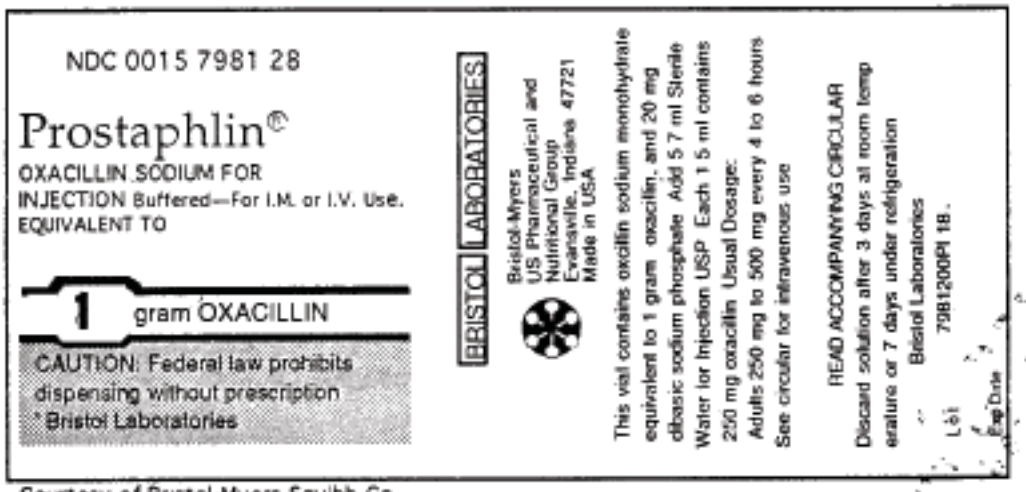
19. Ordered: 25,000 u Heparin in 500 mL I.V. solution to infuse at 25 mL/hr. Calculate the u/hr your client will receive.

20. Ordered: 30 u of Insulin in 250 mL normal saline to infuse at 2 u/hr. Calculate the mL/hr your client will receive.

21. Ordered: 10,000 u of Heparin in 500 mL I.V. solution. Infuse at 25 mL/hr. Calculate the u/hr your client will receive.

22. As you prepare to leave the floor after working 3-11, you check your patient's 1000 mL I.V. that you hung at 8 p.m. Considering it has been infusing at ~~100 mL~~ 100 mL/hr, what will be your TBA?

Look at the following label and answer questions 23-29.



Courtesy of Bristol-Myers Squibb Co.

23. What is the trade name?

24. What is the generic name?

25. What form does the medication come in?

26. How much liquid do you add?

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

28. What is the unit dose?

29. By what route(s) may the medication be administered?

Nursing I
Evaluation #2

1. $\frac{7.5\text{ mg}}{1} \times \frac{1\text{ml}}{5\text{mg}} = 1.5\text{ml}$

2. $\frac{1/100\text{gr}}{1} \times \frac{1\text{ml}}{1\text{mg}} \times \frac{60\text{mg}}{1\text{gr}} = 0.6\text{ml}$

3. $\frac{0.25\text{G}}{1} \times \frac{1.5\text{ml}}{250\text{mg}} \times \frac{1000\text{mg}}{1\text{G}} = 1.5\text{ml}$

4. Ahead

5. $\frac{250{,}000\text{U}}{1} \times \frac{1\text{ml}}{300{,}000\text{U}} =$ 0.8mL

6. $\frac{2500\text{ml}}{24\text{hrs}} = 104\text{ml/hr}$

7. 2PM on 3/10

8. $\frac{15\text{mEq}}{1} \times \frac{1\text{ml}}{2\text{mEq}} = 7.5\text{ml}$

9. $\frac{2\text{dr}}{1} \times \frac{4\text{ml}}{1\text{dr}} = 8\text{ml}$

10. $\frac{1/300\text{gr}}{1} \times \frac{1\text{ml}}{1/200\text{gr}} =$ 0.7mL

11. $\frac{1000\text{ml}}{12\text{hr}} \times \frac{10\text{gtt}}{1\text{ml}} \times \frac{1\text{hr}}{60\text{min}} = 14\text{gtt/min}$

12. $\frac{1000\text{ml}}{12\text{hr}} \times \frac{60\text{gtt}}{1\text{ml}} \times \frac{1\text{hr}}{60\text{min}} = 83\text{gtt/min}$

13. $\frac{500\text{ml}}{8\text{hr}} \times \frac{10\text{gtt}}{1\text{ml}} \times \frac{1\text{hr}}{60\text{min}} = 10\text{gtt/min}$

14. $\frac{500ml}{8hr} \times \frac{60gtt}{1ml} \times \frac{1hr}{60min} = 63gtt/min$

15. $\frac{125ml}{1hr} \times \frac{10gtt}{1ml} \times \frac{1hr}{60min} = 21gtt/min$

16. $\frac{125ml}{1hr} \times \frac{60gtt}{1ml} \times \frac{1hr}{60min} = 125gtt/min$

17. $\frac{100ml}{50min} \times \frac{10gtt}{1ml} = 20gtt/min$

18. $\frac{100ml}{50min} \times \frac{60gtt}{1ml} = 120gtt/min$

19. $\frac{25ml}{1hr} \times \frac{25,000U}{500ml} = 1,250Units/hr$

20. $\frac{2U}{1hr} \times \frac{250ml}{30U} = 17ml/hr$

21. $\frac{25ml}{1hr} \times \frac{10,000U}{500ml} = 500Units/hr$

22. TBA = 700ml

23. Prostaphlin

24. Oxacillin Sodium

25. Powder

26. 5.7ml

27. 1 Gram

28. 250mg/1.5ml

29. IM or IV