

CONTRA COSTA COLLEGE  
LAVA DIVISION  
ASSOCIATE DEGREE NURSING PROGRAM

**CHALLENGE OF NURS 205 (DRUG DOSAGE CALCULATION)  
AND/OR NURS 212 (PHARMACOLOGY FOR NURSES)  
BY EXAM**

**POLICY:**

A student may choose to challenge the Drug Dosage Calculation course (NURS 205) or the Pharmacology for Nurses course (NURS 212) by taking the Nursing Department's challenge exam(s). A student who chooses to challenge these courses and successfully passes the exam, will receive a notation on the official transcript that states that the course was challenged (This is not transferrable to another academic institution). The student will not receive any unit credit or grade for the course. There is no fee for the challenge examination. The challenge examination must be taken prior to enrollment in the course. A student who has taken NURS 205 or NURS 212 is not eligible to take the challenge exam(s).

**PROCEDURE:**

The procedure for challenging the Drug Dosage Calculation course or the Pharmacology for Nurses course by exam is as follows:

1. The student must obtain and complete the Challenge Petition form available in the Admission and Records Office or in the Nursing Department.
2. In order to qualify for the exam, you must have done one of the following:
  - studied similar content in a LVN or other nursing program
  - had equivalent training or work experience, or
  - completed independent study of the course content.
3. Upon successful completion of the challenge exam (75% average), the instructor will complete the Challenge Petition form.
4. NURS 205 and NURS 212 may be challenged by exam one time only.

*Adopted: 5/96*

*Reviewed: 5/97, 5/01, 5/06, 9/15, 8/17*

*Revised: 5/98, 5/99, 5/00, 5/02, 5/03, 5/04, 5/05, 5/07, 5/08, 5/10, 9/15*

*Revised: 5/98, 5/99, 5/00, 5/02, 5/03, 5/04, 5/05, 5/07, 5/08, 5/10, 9/15*

Information for those who are interested in taking a Challenge Examination for

- NURS 205 (Drug Dosage Calculations for Nursing Students)
  - NURS 212 (Pharmacology for Nurses)
- 

Thank you for your interest in challenging the Drug Calculations for Nursing Students (NURS 205) course or NURS 212 (Pharmacology for Nurses). Please read the following to see if this option is appropriate for you.

The challenge exam is offered each semester. In order to qualify for the exam, you must have done one of the following:

- studied similar content in a LVN or other nursing program
- had equivalent training or work experience, or
- completed independent study of the course content.

**PLEASE NOTE:**

You may take the challenge exam one time only. The challenge exam must be taken prior to enrollment in NURS 205. You are not eligible to take the challenge exam if you have taken the NURS 205 course. You will not be granted units, nor will you be given a grade on the transcript. There is no fee for the challenge exam. This is not transferrable to another academic institution.

In order to be successful with the challenge exam, you must achieve a 75% score on the exam. This is the passing score required in all nursing courses.

**NOTE:** If you are challenging NURS 205 Drug Dosage Calculations, please be aware that **calculators are not allowed, and all work must be shown on the exam paper.** You will be provided with the exam and scratch paper. All you need to bring to the exam is a pencil and eraser. Exam time is 3 hours. (See attached practice problems.)

**NOTE:** If you are challenging NURS 212 Pharmacology for Nurses, please allow 2 hours for the exam.

The required CD and workbook for NURS 205 is Castillo, S. and Werner-McCullough, M. *Drug Dosage Calculations: An interactive approach to learning nursing math.* [current edition]. Philadelphia: F.A. Davis Company. This or other drug dosage calculation textbooks can be used in your preparation for the exam.

Course materials for NURS 205 or NURS 212 are available in the CCC bookstore or can be ordered online.

**PLEASE NOTE: If you are interested in taking the challenge exam, please obtain and complete the Challenge Petition form available in the Admission and Records Office or in the Nursing Dept. Please note the Challenge Exam dates on the Nursing Home page.**

Please email Trisha Schaller at [tschaller@contracosta.edu](mailto:tschaller@contracosta.edu) to schedule a date for you to take the challenge examination.

**NURS 205 [DRUG DOSAGE CALCULATION]  
CHALLENGE EXAM PRACTICE PROBLEMS**

NOTE: The following instructions are found on the challenge exam and will be used in the grading of the exam.

**INSTRUCTIONS:** Show ALL work on the test paper. Place the final answer on the answer line. Reduce all fractions.

**General Rounding instructions:** Work decimal problems to three places to the right of the decimal. Round the **final** answer to the hundredths place (two places to the right of the decimal).

**Rounding for IV problems**

**(gtt / mL and mL / hr):** Round the final answer to the nearest whole number.

**(infusion and completion time):** Round the final answer to the nearest minute.

**Rounding for NG formula strength problems:** Round the final answer to the nearest whole number

**Eliminate trailing zeros** in a decimal fraction (e.g., 1.3, not 1.30).

**Place a leading zero** in front of all decimal fractions (e.g., 0.32, not .32).

**Good luck!**

1. The patient is receiving an IV of D<sub>5</sub>/W infusing at 100 mL / hr at the start of the shift (0700). He gets an IVPB of Pepcid 20 mg in 50 mL NS q.12h (1000 - 2200). He also receives Ceftriaxone 0.5 g in 50 mL NS q.8h. For breakfast the patient took 4 oz of apple juice and 6 oz of broth. At 1000 the patient drank 1 cup of water. For lunch the patient took 1 glass of milk and 1 Tbs of jello. The patient has a continuous bladder irrigation running at 50 mL / hr throughout the shift. The nurse emptied 1025 mL of urine from the indwelling catheter bag at the end of the shift. The patient vomited 150 mL at 1500. Calculate the patient's I & O beginning at 0700 and ending at 1500.

\_\_\_\_\_

\_\_\_\_\_

2. The order is for Dilantin 200 mg p.o. b.i.d. The pharmacy sends a bottle of Dilantin labeled 100 mg / 2.5 mL. How many tsp will the nurse administer?

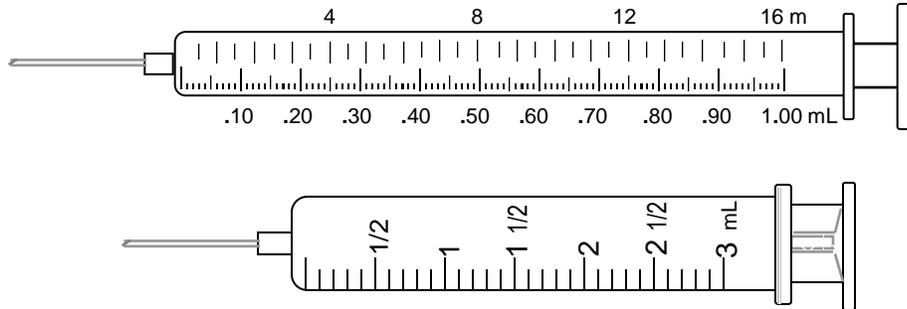
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NURS 205 Challenge Exam Practice Problems

3. The M.D. orders Epinephrine 1:1000 0.4 mg subcut stat for a patient experiencing an allergic reaction. The nurse has an ampule containing Epinephrine 1:1000 1 mg / mL. How many mL will the nurse administer?

\_\_\_\_\_

Shade in the desired amount in the most appropriate syringe.



4. Tylenol 0.3 g p.o. q.4h is ordered for the patient. Pharmacy sends a bottle of Tylenol liquid labeled 240 mg / 5 mL. How many mL will the nurse administer?

\_\_\_\_\_

5. Vancomycin 900 mg IVPB is order q.AM for a patient who weighs 184.4 lbs. The drug book states the following about vancomycin administration:

<p><b>VANCOMYCIN</b></p> <p>IM, IV (Adults) Once daily dosing 10 – 12 mg / kg q.24h.</p>
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Is the ordered dose a safe dose for the patient? \_\_\_\_\_

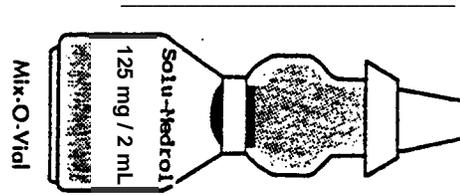
What is the maximum safe dose for this patient? \_\_\_\_\_

6. The M.D. orders a Lidocaine drip to be started on a patient at 8 mg / min. At 1000 the nurse hangs the IV of NS 0.9% 500 mL with 4 g of Lidocaine. The IV is hung with a microgtt tubing. To administer the ordered dose, how many mL / hr will the nurse calculate?

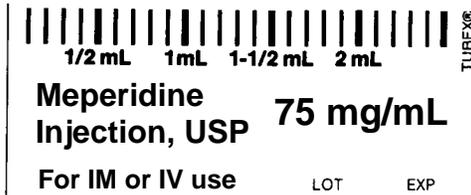
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Nursing 205 Challenge Exam Practice Problems

7. The patient is to receive Methylprednisolone sodium (Solu-medrol) IVP 12.5 mg daily. The nurse has the following vial available. How many mL will the nurse give?



8. The nurse is to administer Meperidine 60 mg and Vistaril 25 mg IM at 0900. The nurse has the following pre-filled syringe and an ampule of Vistaril labeled 50 mg / mL. How many mL of each drug will the nurse administer? Shade in the total amount that the nurse will administer in the pre-filled syringe.



Meperidine \_\_\_\_\_  
 Vistaril \_\_\_\_\_  
 Total Amt \_\_\_\_\_

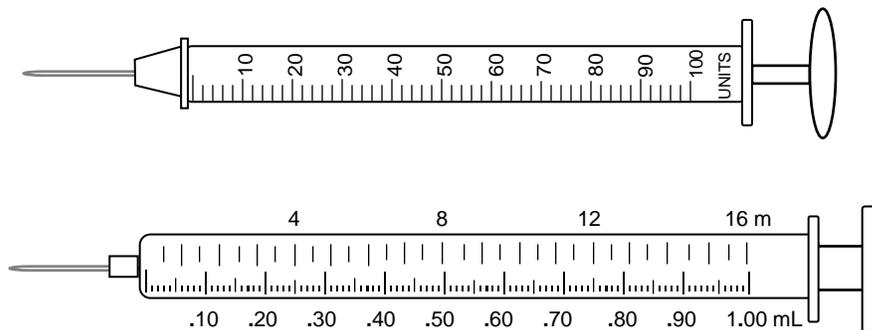
9. Digoxin 0.25 mg IVP is ordered daily for the patient. Available is an ampule of Digoxin 500 mcg / 2 mL. How much (mL) will the nurse draw up in the syringe?

\_\_\_\_\_

10. Heparin 3,000 units subcut is ordered q.12h for the patient. Pharmacy sends a vial labeled Heparin 20,000 units / 5 mL. How much (mL) will the nurse administer?

\_\_\_\_\_

Shade in the amount in the most appropriate syringe.



Nursing 205 Challenge Exam Practice Problems

11. The patient has a continuous heparin infusion. The nurse is been given credit for 325 mL at 0700. The order is for NS 500 mL with 15,000 units of heparin to infuse at 600 units/hr. The IV has a pedi-drip tubing. Calculate the flow rate.

\_\_\_\_\_

How much IV credit will the nurse give the next shift if the I & O is closed at 1500?

\_\_\_\_\_

12. The M.D. orders a  $\frac{3}{4}$  strength nasogastric tube feeding formula to infuse at 60 mL / hr. The nurse has an 8 oz can of the formula available. How much water will the nurse add to make the desired strength?

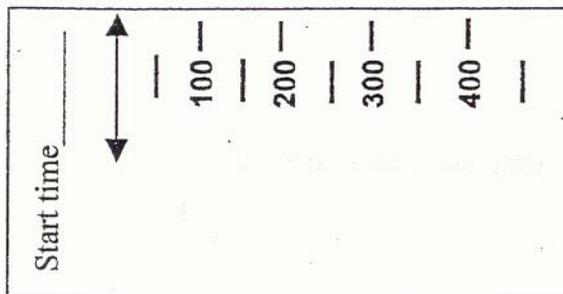
\_\_\_\_\_

13. One unit packed red blood cells (260 mL) is started at 0415 to infuse over 1.5 hours. The blood administration set delivers 10 gtt / mL. Calculate the mL / hr. What is the completion time of the PRBC unit?

\_\_\_\_\_

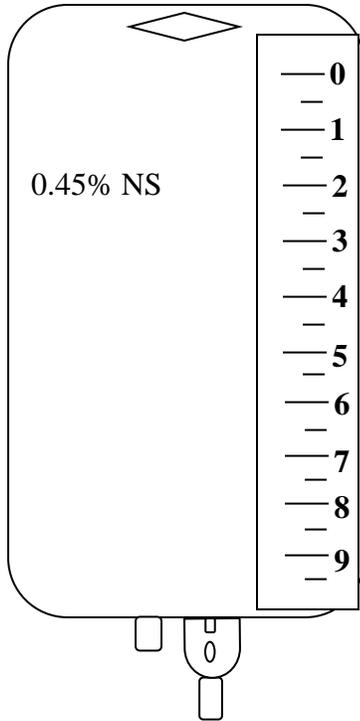
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14. At 1200, the nurse hangs up 500 mL of Lactated Ringers to infuse over 4 hours. At 1400, the rate is decreased to 75 mL / hr. Label the flow meter hourly starting with the amount left at 1400.



Nursing 205 Challenge Exam Practice Problems

15. The nurse is given credit for 850 mL of 0.45% NS at 2300, the start of the shift. The IV is infusing at 30 mL / hr. At 0400 the IV rate is increased to 50 mL / hr. Label the flow meter q.2h starting with the amount left at this time.



Calculate the flow rate of the increased rate using a drop factor of 15 gtt / mL.

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How much IV credit will the nurse give the next shift at 0700?

\_\_\_\_\_

Shade in this amount in the IV bag.

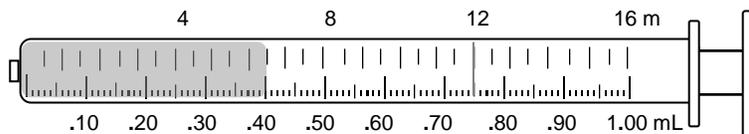
## Nursing 205 Challenge Exam Practice Problems

### ANSWERS

1. I = 1695 mL  
O = 775 mL

2. 1 tsp

3. 0.4 mL



4. 6.25 mL

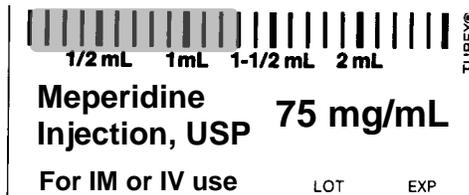
5. Yes, safe dose

1005.816 mg /dose is maximum safe dose for this patient.

6. 60 mL/hr

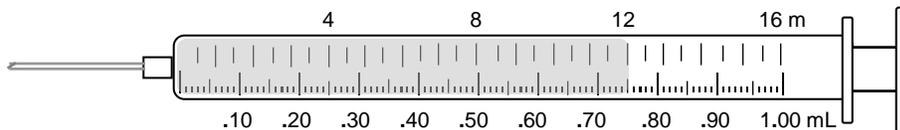
7. 0.2 mL

8. Meperidine = 0.8 mL; Vistaril = 0.5 mL  
Total amount = 1.3 mL



9. 1 mL

10. 0.75 mL

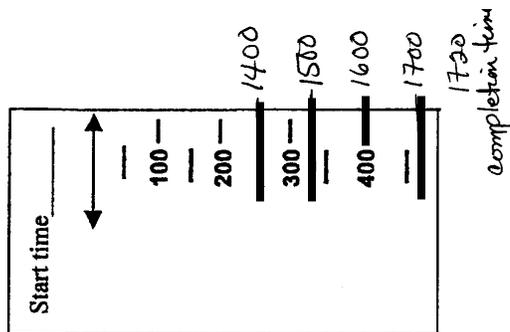


11. 20 gtt/min; 165 mL

12. 80 mL

13. 173 mL/hr; 0545

14.



15. 13 gtt/min; 550 mL credit

