

BMCC MAT LAB

NURSING MATH

MAT104

Practice Problem: Set 2

1. The label on a vial of powdered penicillin reads: penicillin 2,000,000 U.S.P. units. The physician has ordered penicillin 100,000 units stat and b.i.d. How many cubic centimeters of diluent would be needed to produce a solution containing 100,000 units per cc?
2. How much diluent will be needed to make a solution of 200,000 units per cc if the vial contains 1,00,000 units of dry drug?
3. The order is for D5 ½ NS 750ml over 6 hr. The drop factor is 15 gtt/ml. How many gtt should be administered per minute?
4. The doctor orders atropine 1/100 gr. IV. On hand is a vial containing 0.3 mg/cc. How many cc's would you give?
5. A vial is labeled 0.5 g per 2 ml. A dosage of 750 mg. Has been ordered. How much would you give?
6. A patient is to receive 4 mg. Of morphine sulfate subcutaneously. On hand is 10 mg. per cc. How many minims would you give?
7. Atropine sulfate 0.6 mg. is ordered. On hand is atropine 1/200 gr. per cc. How many minims would you give?
8. A patient is to receive 2000 cc D10 ½ NS intravenously over the next 24 hr. How many calories will he receive via the IV?
9. A patient has a temperature of 100 degrees F. Convert this temperature to degrees centigrade.
10. A patient is to receive 250 cc. Of packed red blood cells over the next three hours. Calculate the drip rate if the set calibration is 10 gtt/ml.
11. What is the infusion time for an IV of 900 ml. Of Ringer's Lactate ordered to infuse at 80 ml/hr.?
12. Administer 110 ml/hr via a set calibrated at 20 gtt/min.

13. Volume to infuse is 100 ml. Flow rate is 42 gtt./min., using a microdrip. What is the infusion time?
14. A patient drinks 7 ounces of cola, 5 ounces of jello and 8 ounces of broth. How many cc's has the patient drunk?
15. A doctor orders a 500 mg. dose of hydrochlorothiazide. You have 25 mg. tablets on hand.
 - a. How many tablets would you give?
 - b. Should you question this dose?
16. 15 ml. Of an IV medication is to infuse in 30 minutes. The IV administration set has 60 gtt./ml. At what rate should the nurse set the IV?
17. Atropine 0.1 mg. is ordered for a child. The label reads Atropine 0.4 mg./ml. How much medication should the nurse administer?
18. 800 mg. of dopamine is to infuse in 500ml. Dextrose 5% in water at 25 ml./hr. The IV administration set has 60 gtt./ml. How many mg. per minute are being administered?
19. The client has an IV of 1000 ml. Of dextrose 5% in water infusing at 90 ml./hr. How many hours would it take for the IV to infuse?
20. The order reads dyemelor 0.25 gm. On hand are 500 mg. tablets. How many tablets would you give?
21. The order is for potassium chloride 8 mEq. The vial is labeled 20 mEq. In 10 cc. How many cc's would you administer?
22. The doctor orders 250 ml. Of D5W over a given 24 hour period. How many microdrops per minute would you administer (assume there are 60 gtt./cc.)?
23. The order is gr. 1/100 of scopolamine I.M. How would you prepare it for administration if the vial is labeled 0.4 mg. in 2 cc.?
24. 2000 ml. Of D5NS is to be given IV over 16 hours. You will be using a macrodrip (10 gtt./cc.). Calculate the number of drops per minute.
25. The doctor order 1000 ml. Of a 5% dextrose in water to run over 10 hours. The drop factor is 20. How many drops per minute would you regulate the flow?
26. Ms. Smith has a temperature of 103° F. What is this reading on the centigrade (celsius) thermometer?

27. 150 ml. of D5W is to run in over 60 minutes, using a micro drip (60 gtt./ml.). How many drops should the patient receive per minute?
28. The patient is to receive 0.5 gm. Aldomet. The bottle is labeled aldomet 125 mg. per tablet. How many tablets would you give?
29. The patient is to receive atropine gr. 1/150 I.M. The dosage on hand is 1 cc = 0.4 mg. How many cc's would you give?
30. The patient is to receive procaine penicillin 1.2 million units I.M. The dosage on hand is 300,000 units/ml. How many ml's would you administer?
31. The patient is to receive atropine gr. 1/250. The dosage available is 1 cc. = gr. 1/100. How many minums would you administer?
32. The patient is to receive phenobarbital gr. $\frac{1}{2}$. The dosage available is 15 mg. per tablet. How many tablets would you give?
33. The patient is to receive 45 mEq. Of vitamin B12. The bottle is labeled 300 mEq in 10 ml. How many ml's would you administer?
34. The patient is to receive 600 mg. of aspirin. The bottle is labeled 5 gr. per tablet. How many tablets would you give?
35. The doctor orders 2000 cc. of IV fluids to run over 24 hours. The drip factor is 10. How many drops per minute would you give?
36. The patient is to receive 40 units of regular insulin. The dosage on hand is 100 units. How many minums would you give, using a 16 minum syringe?
37. The patient is to receive 15 mEq. Of KC1. The dosage on hand is 20 mEq/15 cc. How many cc's would you give?
38. Calculate the number of calories in 1000 cc. of a 10% glucose in 0.45 normal saline.
39. The doctor orders 0.25 mg. of lanoxin to be administered I.M. You have on hand 2 vials of lanoxin. One vial is labeled 0.05 mg. per cc., and the other is labeled 0.5 mg. per cc. Calculate the dosage needed from each vial.

Question 40 – 42 refer to a 235 lb. male who is 5 feet 11 inches tall.

40. Calculate this patient's ideal body weight (IBW).
41. Calculate the number of calories needed to maintain his ideal body weight.

42. The client consumes 3200 calories per day. If he wants to lose 8 lbs. in the next month, he must reduce his total daily intake to how many calories?

43. A female weights 165 lb. She is five feet 10 inches tall. How many pounds is she over her IBM? Is she overweigh o