

MONTGOMERY COUNTY COMMUNITY COLLEGE
NURSING PROGRAM

Review Math Problems for NUR 211 Students

1. The physician has ordered a liter of D₅W at 82 ml/hr. The IV was hung at 2 p.m. What time will it be complete?
2. The previous nurse tells you that IV #3 (a 1 liter bag of NS) is infusing at a 16-hour rate. There is 400 ml remaining at 4 p.m. What time will you hang the next IV?
3. You have an IV infusing at 20 gtts/min (15 gtts/ml) and need to convert it to a pump. At what rate (ml/hr) will you set the pump?
4. The MD orders Ancef 500 mg q 6 hrs. It is mixed in 100 ml NS and needs to infuse over 30 minutes. What is the rate in gtts/min if the drop factor is 15?
5. The physician orders Demerol 50 mg and Vistaril 35 mg IM q 4 hours for pain. You have a vial labeled Demerol 75 mg/ml and one labeled Vistaril 50 mg/ml. What is the total volume to be administered?
6. You are calculating your patient's I + O at the end of the shift. The previous nurse left you 425 ml in the patient's IV. She had French toast, 8 oz. of milk and 8 oz. coffee for breakfast. For lunch she had a tuna salad sandwich, 16 oz of iced tea, and a 4 oz. container of sherbet. You gave her 6 oz. of juice with each of her 2 medications. In addition to her oral medications you gave her Ancef 250 mg in 100 ml NS at 8 am and 2 pm. You hung a new liter of D₅NS, of which 425 ml remains. Your patient vomited 225 ml and voided 4 times: 350 ml, 275 ml, 125 ml, and 250 ml. What is the I + O for your shift?

7. During report, you receive a credit of 350 ml for your patient's IV. The IV is infusing at a rate of 75 ml/hr. If your shift started at 3 pm, what time should you anticipate hanging the next IV?

8. The doctor ordered a liter of D₅W over 10 hrs. What is the rate in ml/hr?

9. What is the rate in gtts/min of the above IV if your drop factor is 60?

10. If the physician orders 3 liters of D₅LR at a rate of 75 ml/hr, what is the total time of infusion?

11. A liter of D₅LR is ordered over 9 hrs. Calculate the gtts per minute if the drop factor is 10.

12. The physician orders 1500 ml over 4 hours. After 1 ½ hrs, the patient develops circulatory overload. The physician changes the rate to 42 ml/hr. If the IV was started at 3 pm, what time will it be finished?

13. You need to infuse 750 ml over 5 hours. At what rate (ml/hr) will you set the pump?

14. The doctor orders 2 liters of D₅LR to infuse over 24 hours. The first IV has been infusing for 9 hours and you note that 500 ml remains. At what rate in gtts/min must the IV infuse to finish on time if the drop factor is 15?

15. What is the total time of infusion, if a 1L IV is ordered at a rate of 63 ml/hr?