

MATH PRACTICE PROBLEMS

Group 1

1. The physician orders Wellcovorin 1mg IM. The drug comes in powdered form in a vial containing 50mg. The directions for reconstitution are: Add 5mL of diluent for a final concentration of 10mg/1mL. After reconstituting, how many mL should you draw up?
2. A patient is receiving an infusion of aminophylline. The IV solution contains 250mg of aminophylline in 250 ml of D5W, infusing at 15mL/hr. How many mg of aminophylline is the patient receiving per hour? Per minute?
3. The recommended dose range for carmustine is 200-250mg/m²/dose. What would be the appropriate dose range for a patient with a BSA of 0.83m² ?
4. A patient is to receive lidocaine 1mg/min IV. You have a solution of 2g Lidocaine in 1000mL D5W. How many mL/hr should the patient receive?
5. The physician orders IV Diprivan 100mcg/kg/min. Your patient weighs 165 lb. How many mcg/min should the patient receive?
6. Your patient is to receive dacarbazine 375mg/m²/day IV. The patient's height is 72 inches and his weight is 180 lbs. How many mg should your patient receive? (Use nomogram).
7. The physician orders D5LR 1000mL/10hr. The IV set drop factor is 20gtt/mL. How many gtt/min should the patient receive?
8. Your patient is to receive an infusion of Pitocin. The drug comes 20U/1000mL in D5W. The doctor orders 0.01U/min. How many mL/hr should the patient receive?
9. The physician orders D5W 500mL/5hr. The drop factor of the IV set is 15 gtt/mL. How many mL/hr will the patient receive?
10. The physician orders cephalexin capsules 0.5g PO. The drug on hand is 250mg/capsule. How many capsules should the patient receive?
11. The patient is to receive penicillinV potassium oral solution 500,000U PO. You have on an oral solution labeled 200,000U/5mL. How many mL should the patient receive?
12. The physician orders the patient to receive heparin 1500U/hr of a solution containing 30,000U/1L. At what rate would you set the IV using a 60gtt/mL administration set? Answer should be in both ml/hr and gtts/min.

13. A patient is receiving an IV infusion of 100 mL NS with 100U of regular insulin added. The solution is infusing at 1mL/hr. How many units of insulin is the patient receiving every hour?
14. The physician orders heparin 1250Units/hr. You have a solution of 50,000Units/1000mL. How many gtt/min should the patient receive, using a 60gtt/mL set?
15. The order is to add 30,000Units heparin to 1000mL D5W and infuse at 30mL/hr. How many units of heparin will the patient receive per minute?
16. The physician orders morphine 5mg IM PRN for pain. You have on hand ampules containing 1/6gr per mL. How many mL should your patient receive?
17. Your patient is to receive 500mg Levoquin IV daily. The drug comes mixed in 100mL of NS to be infused over 30 min. How many gtt/min should you infuse using a 15gtt/mL IV set?
18. The physician orders Cytoxan 425mg IV for a patient weighing 154lb. The recommended dose range is 3-5mg/kg IV twice weekly. Is this an appropriate dose for this patient?
19. A patient is to receive Vibramycin 100mg PO twice a day for 7 days. On hand are 50 mg capsules. How many capsules will the patient receive for the 8AM dose?
20. The physician orders Zantac 50mg IM every 6hours. The drug comes in a 6mL ampule labeled 25mg/mL. How many mL should the patient receive for the 6AM dose?

ANSWERS:

1. 0.1ml
2. 15mg/hr; 0.25mg/min
3. 166-207.5mg/dose
4. 30mL/hr
5. 7500mcg/min
6. 750 mg
7. 33gtt/min
8. 30mL/hr
9. 100mL/hr
10. 2 capsules
11. 12.5mL
12. 50gtt/min, 50 ml/hr
13. 1U/hr
14. 25gtt/min
15. 15U/min
16. 0.5mL
17. 50gtt/min
18. no; appropriate range for this patient is 210-350mg/dose
19. 2 capsules
20. 2mL