IM 5 Dosage Calculation Practice Problems

1. Patient: A 20 kg child
   Prescribed Medication: Administer 300 mg of erythromycin by mouth every 6 hours for 10 days.
   Medication Reference:
   Recommended Dose: 15 to 20 mg/kg/day divided every 6 hours
   Concentration: 200 mg/5 mL
   How many milliliters will the nurse administer per dose?

   Answer: 7.5 mL

2. The medication order is to administer a loading dose of digoxin (Lanoxin) 15 mcg/kg. The neonate weighs 4 pounds. Available: an ampule labeled Lanoxin 0.25 mg/mL. How many mL will you administer? (Round to the nearest tenth)

   Answer: 0.1 mL

3. A 25 kg child is to receive cefotaxime, IVPB.
   Medication Reference
   Recommended Dose: Cefotaxime 50 to 180 mg/kg/24 hours in 4 or 6 equally divided doses.
   Which dose falls within the recommended range?

   A. 1250 mg every 6 hours
   B. 205 mg every 6 hours
   C. 300 mg every 4 hours
   D. 1125 mg every 4 hours

4. The nurse is to administer 100 ml IVPB over 1 hour using IV tubing drop factor of 30 gtt/mL. The tubing should be set at ___ drops per minute?
   Answer: 50 gtt/min

5. Patient: An 20-kg child
   Prescribed Medication: 8 ml of acetaminophen and codeine elixir, PO, for pain
   Concentration of elixir: 120 mg acetaminophen and 12 mg codeine per 5 mL
   The child will receive how many milligrams of codeine in the 8 milliliter dose?

   Answer: 19 mg

6. A 50 kg child is to receive hydroxyurea, PO, every third day.
   Medication Reference:
   Recommended Dose: 80 mg/kg/every 3 days
   The nurse should calculate the dose as how many milligrams every 3 days?

   Answer: 4000 mg

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7. The suggested dose of tobramycin is 4 mg/kg/day to be administered every 12 hours in equally divided doses. An infant weighing 1500 g should receive how many mg/dose?

   Answer: 3 mg

8. Patient: 15 kg child
   Prescribed Medication: Acylovir, IV, 10 mg/kg every 8 hours
   The nurse should calculate the dose of acylovir to be how many milligrams every 8 hours?

   Answer: 150 mg

9. The recommended range for a medication is 200 to 400 mg/kg/day in 4 to 6 divided doses. The patient is 8 kg.
   Which of the following doses are within the recommended range?

   A. 1600 mg every 6 hours
   B. 600 mg every 4 hours
   C. 500 mg every 6 hours
   D. 800 mg every 4 hours

10. The nurse receives an order to administer 150 mL of normal saline over 2 hours. The nurse should administer the normal saline bolus at how many milliliters per hour via an IV pump?

    Answer: 75 ml/hr

11. The nurse is to administer 200 mg of acetaminophen elixir PO. The nurse has acetaminophen 120 mg/5 mL available. How many milliliters should the nurse draw up in the PO syringe? (round to the nearest tenth)

    Answer: 8.3 mL

12. Medication order: 20 mg of a medication by mouth tid
    Patient weight: 132 pounds
    Recommended dose range: 1 to 3 mg/kg/day
    Is this a safe medication order?

    Answer: yes

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13. A 15 kg child is to receive cefotaxime, IVPB
    Medication Reference:
    Recommended Dose: Cefotaxime 50 to 180 mg/kg/24 hours in 4 or 6 equally divided doses.
    Which dose falls within the recommended range?

    A. 100 mg every 6 hours.
    B. 2 gm every 6 hours.
    C. 190 mg every 4 hours.
    D. 750 mg every 4 hours.

14. The nurse is caring for a patient who has an order for 500 mg azithromycin IVPB once a day.
    An IVPB of 500 mg azithromycin mixed in 500 ml normal saline is in the patient's medication drawer.
    The IVPB is to be administered over 3 hours on an IV Pump. At what rate should the nurse administer the medication?

    A. 50 mL/hr
    B. 167 mL/hr
    C. 500 ml/hr
    D. 1500 mL/hr

15. Medication order: 35 mg of a medication by mouth tid
    Patient weight: 99 pounds
    Safe dose range: 2 to 4 mg/kg/day
    Is this a safe medication order?

    Answer: yes