Calculation Worksheet #4 - Answers

1. Ordered is flucloxacillin 250 mg IM. Available is 1 G in 10 mL. How much should the nurse administer in mL? **2.5**

   250 mg/1,000 mg x10 mL = 2.5 mL

2. Order: Administer 160 mg IV. Available is 100 mg/2 mL. How much should the nurse administer in mL? Do not round. **3.2**

   160 mg/100 mg x 2 mL = 3.2 mL

3. Azulfidine 1.5 g has been ordered every 12 hrs. Available are 500mg tablets. How many tablets should the nurse administer per day? **6**

   1.5 g/0.5 g = 3 x 2 = 6 tablets

4. Ergotrate maleate 200 mcg is ordered po daily. Available is 0.2 mg. How many tablets should the nurse administer? **1**

   200 mcg/200 mcg = 1 tablet

5. From 0700 to 1900 the nurse calculates the patient's total intravenous fluid intake as ___ milliliters. An IV is infusing at 50 mL/hour. At 0900 the patient will receive IVPB of 125 mL for 30 minutes. What is the total amount the patient will receive during this time? **700**

   12 hrs x 50 mL = 600 mL – 25 mL = 575 mL + 125 mL = 700 mL

6. Solumedrol 1.5 mg/kg is ordered for a child weighing 42 lb. Solumedrol is available as 75 mg / 1 mL is available. How many mL must the nurse administer? Round to the 100th. **0.38**

   1.5 mg x 19.1 kg = 28.6/75 mg x 1 mL = 0.38 mL

7. Give patient 17.1 mg of dopamine in 223 mL of D5W to be infused at a rate of 17,221 mcg/hr. Calculate the flow rate in mL/hr. Round answer to the 10th. **224.6**

   17,221 mcg/17,100 mcg x 223 mL = 224.577953 = 224.6 mL/hr

8. Calculate the IV flow rate for 0.2 L of D5W IV over 462 min. Infusion set has drop factor of 59 gtts/mL. What is the IV flow rate in gtts/min? Round answer to a whole number. **26**

   200 mL/462 min x 59 gtts = 25.5411255 = 26 gtts/min

9. Ordered Lasix 24 g IV push now. Available: 22,000,000 mcg in 12 mL. How much will the nurse draw up? Round answer to a whole number. **13**

   24 g/22 g x 12 mL = 13.0909..... = 13mL

10. Calculate the IV flow rate for 392 mL of D5W IV over 582 min. Infusion set has drop factor of 74 gtts/mL. What is the IV flow rate in gtts/min? Round answer to a whole number. **50**

    392 mL/582 min x 74 gtts = 49.8419244 = 50 gtts/min

11. The total volume ordered is 225 mL N/Saline 0.9% IV. The time over which it is to be given is 40 minutes. The drop factor is 15. How many drops per minute will be delivered? Round answer to a whole number. **84**

    225 mL/40 min = 5.625 x 15 gtts = 84.375 = 84 gtts/min

12. Ordered 7 g of Amoxicillin. Amoxicillin is available as 0.016 mg per 20 mL. How much will the nurse draw up? Round answer to the 10th. **8.8**

    0.007 mg/0.016 mg x 20 mL = 8.75 = 8.8 mL

13. Potassium chloride is available as 0.016 kg per tablet. Potassium Chloride (K-Dur), 24,000,000 mcg, is ordered. How many tablets would the nurse administer? **1.5**

    0.024 mg/0.016 mg = 1.5 (1 ½) tablets

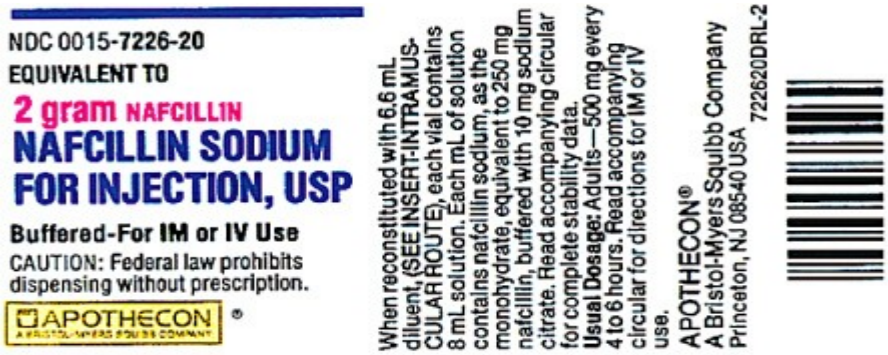
14. Aggrastat at 23.8 mg in 129 mL is to be infused at 3 mcg/kg/hr in a patient who weighs 82 kg. At what flow rate in mL/hr will you set the pump? Round answer to the 10th. **1.3**

246 mcg/23,800 mcg x 129 mL = 1.3336134 = 1.3 mL

15. Administer 0.06 g of codeine po now. Available are 30 mg tablets. How many tablets should the nurse administer? **2**

60 mg/30 mg = 2 tabs

16. Administer Nafcillin 0.5 g, IM, q6h. Using the following drug label, how many milliliters should the nurse give per dose? Do not round. **2**



0.5 g/2 g =0.25 g x 8 mL = 2 mL

17. Administer Prednisone (Deltazone) 6 mcg/kg/min. The patient weighs 165 lb. Available is 250 mL D_5W with Deltazone 50 mg. How many milliliters per hour will the nurse need to run the infusion? **135**

165/2.2 = 75 kg; 6 mcg x 75 = 450 mcg/min; 0.45 mg/50 mg = 0.009 mg x 250 mL = 2.25 mL x 60 (1 hr) = 135 mL/hr

18. Administer Dobutamine 250 mg in 100 mL of D_5W at 15 mcg/kg/min. Patient weighs 120 lb. Calculate the flow rate in milliliters per hour. Round final answer to the nearest tenth. **19.6**

120/2.2 = 54.5 kg; 15 mcg x 54.5 = 817.5 mcg/min; 817.5 mcg= 0.8 mg/250 mg = 0.0032 mg x 100 mL = 0.32 x 60 min = 19.6 mL/hr

19. 8 mL of normal saline is added to a 2 mL vial of Thiamine containing 100 milligrams (mg). How many mg of Thiamine are in each milliliter of fluid? **20**

200 mg/10 mL = 20 mg/mL

20. Administer 1 G of erythromycin IVPB every 8 hrs x 5 days. The patient will receive how many micrograms for the course of treatment? **15,000,000 mcg**

1,000 mg x 3 x 5 days = 15,000 mg = 15,000,000 mcg in 5 days

21. A nurse calculates the patient's total intravenous (IV) fluid intake from 0700 to 1900. An IV of NS is infusing at 75 mL/hr. The patient also receives 3 IVPB of 100 mL for 30 minutes. What is the total amount of IV fluid in mL for this time frame? Do not round. **1087.5 mL**

75 X 12 = 900; 900 mL/12 hrs – 112.5 mL (1.5 hrs interrupted) = 787.5 mL + 300 mL (3 IVPB) = 1087.5 mL total for the time frame.

22. A patient needs 2 g of medication. It comes in 250 mg. How many doses should be administered? How many hours will it take if the patient can have one dose every 6 hours? **8 doses and 48 hrs**

2,000 mg/250 mg = 8 doses; 4 doses per day = 2 days (48 hrs)

23. The total volume to be administered from an IV drip is 1,250mL over 10 hours. How many milliliters per minute will be given? Round answer to a whole number. **2** 1,250/10= 125/60 = 2.08 = 2

24. A child who weighs 14 kg is ordered 55 mcg/kg IV, 2 hours before surgery. The solution strength is 2 mg/mL. How many mL should be administered? Round answer to the 100th. **0.4 mL**

14 x 55 = 770 mcg = 0.7 mg/ 2 mg = 0.35 mL or 0.4 mL

25. A patient is receiving 875 g of a medication in 1L of IV fluid. How many g per mL is the patient receiving? Round answer to the 10th. **0.9 g/mL**

875/1000 = 0.875 = 0.9