

## 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**

$$250 \text{ mg}/1,000 \text{ mg} \times 10 \text{ mL} = 2.5 \text{ mL}$$

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**

$$160 \text{ mg}/100 \text{ mg} \times 2 \text{ mL} = 3.2 \text{ mL}$$

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**

$$1.5 \text{ g}/0.5 \text{ g} = 3 \times 2 = 6 \text{ tablets}$$

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

$$200 \text{ mcg}/200 \text{ mcg} = 1 \text{ tablet}$$

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**

$$12 \text{ hrs} \times 50 \text{ mL} = 600 \text{ mL} - 25 \text{ mL} = 575 \text{ mL} + 125 \text{ mL} = 700 \text{ mL}$$

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 100<sup>th</sup>. **0.38**

$$1.5 \text{ mg} \times 19.1 \text{ kg} = 28.6/75 \text{ mg} \times 1 \text{ mL} = 0.38 \text{ mL}$$

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 10<sup>th</sup>. **224.6**

$$17,221 \text{ mcg}/17,100 \text{ mcg} \times 223 \text{ mL} = 224.577953 = 224.6 \text{ mL/hr}$$

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**

$$200 \text{ mL}/462 \text{ min} \times 59 \text{ gtts} = 25.5411255 = 26 \text{ gtts/min}$$

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**

$$24 \text{ g}/22 \text{ g} \times 12 \text{ mL} = 13.0909\dots = 13 \text{ mL}$$

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**

$$392 \text{ mL}/582 \text{ min} \times 74 \text{ gtts} = 49.8419244 = 50 \text{ gtts/min}$$

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**

$$225 \text{ mL}/40 \text{ min} = 5.625 \times 15 \text{ gtts} = 84.375 = 84 \text{ gtts/min}$$

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

$$0.007 \text{ kg}/0.016 \text{ kg} \times 20 \text{ mL} = 8.75 = 8.8 \text{ mL}$$

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**

$$0.024 \text{ kg} / 0.016 \text{ kg} = 1.5 (1 \frac{1}{2}) \text{ tablets}$$

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 10<sup>th</sup>. **1.3**

$$246 \text{ mcg} / 23,800 \text{ mcg} \times 129 \text{ mL} = 1.3336134 = 1.3 \text{ mL}$$

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

$$60 \text{ mg} / 30 \text{ mg} = 2 \text{ tabs}$$

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**



$$0.5 \text{ g} / 2 \text{ g} = 0.25 \text{ g} \times 8 \text{ mL} = 2 \text{ mL}$$

17. Administer Prednisone (Deltazone) 6 mcg/kg/min. The patient weighs 165 lb. Available is 250 mL D<sub>5</sub>W with Deltazone 50 mg. How many milliliters per hour will the nurse need to run the infusion? **135**

$$165 / 2.2 = 75 \text{ kg}; 6 \text{ mcg} \times 75 = 450 \text{ mcg/min};$$

$$0.45 \text{ mg} / 50 \text{ mg} = 0.009 \text{ mg} \times 250 \text{ mL} = 2.25 \text{ mL}$$

$$\times 60 (1 \text{ hr}) = 135 \text{ mL/hr}$$

18. Administer Dobutamine 250 mg in 100 mL of D<sub>5</sub>W at 15 mcg/kg/min. Patient weighs 120 lb. Calculate the flow rate in milliliters per hour. Round final answer to the nearest tenth. **19.2**

$$120/2.2 = 54.5 \text{ kg}; 15 \text{ mcg} \times 54.5 = 817.5 \text{ mcg/min}; \\ 817.5 \text{ mcg} = 0.8 \text{ mg}/250 \text{ mg} = 0.0032 \text{ mg} \times 100 \text{ mL} = \\ 0.32 \times 60 \text{ min} = 19.2 \text{ mL/hr}$$

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**



$$200 \text{ mg}/10 \text{ mL} = 20 \text{ mg/mL}$$

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**

$$1,000 \text{ mg} \times 3 \times 5 \text{ days} = 15,000 \text{ mg} = 15,000,000 \text{ mcg in 5 days}$$

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**

$$900 \text{ mL}/12 \text{ hrs} - 112.5 \text{ mL (1.5 hrs interrupted)} = 787.5 \text{ mL} + 300 \text{ mL} \\ (3 \text{ IVPB}) = 1087.5 \text{ mL total for the time frame.}$$

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**

$$2,000 \text{ mg}/250 \text{ mg} = 8 \text{ doses}; 4 \text{ doses per day} = 2 \text{ days (48 hrs)}$$

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 100<sup>th</sup>. **0.4 mL**

$$14 \times 55 = 770 \text{ mcg} = 0.7 \text{ mg} / 2 \text{ mg} = 0.35 \text{ mL or } 0.4 \text{ mL}$$

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 10<sup>th</sup>. **0.9 g/mL**

$$875/1000 = 0.875 = 0.9$$