

Dimensional Analysis Quiz

Please Show Your Work

1. You are to give 30 mg of Inderal. The available dosage strength is a scored 60mg tablet. How many tablets will you give?
2. Premarin 1.25 mg is ordered daily for your patient. The only available tablet strength is 625 mcg. How tablets will you give?
3. Potassium penicillin 1,200,000 u has been ordered for your patient. The available tablets are 400,000 u each. How many tablets will you give?
4. Imipramine HCL is available in 50 mg tablets. How many tablets will you administer if the order is for .05 g?
5. Scopolamine gr 1/300 is ordered. The drug is available in 0.4 mg/mL. How many mL will you give?
6. Calculate the drip rate for 100 mL of IV Fluids to be given over a half hour via a giving set which delivers 10 drops/ml.

7. One and a half liters of Normal Saline is required to be given over 4 hours. Using a giving set which delivers 10 drops/mL how many drops per minute will need to be given?

8. One liter of Dextrose 5% in water is to be given over 3 hours. The drop factor is 10. The IV has been running for 1 hour and 15 minutes. 500 mL remain. How many drops per minute are needed so that the IV finishes in the required time?

9. One litre of IV Fluids is to be given over 11 hours. The drop factor is 10. The IV has been running for 9 hours and 45 minutes. 100 mL remain. How many drops per minute are needed so that the IV finishes in the required time?

10. Heparin 8,000 units is ordered. On hand is 10,000 units per mL. How many ml will you give?

11. Order is for Solumedrol 10mg/kg/day BID. Solumedrol is supplied in 40 mg/2mL. The child's weight is 8 kg. How many mL will you give per day? Per dose?

12. Zofran 30 mg/kg IV every 8 hours for nausea is ordered. Available is Zofran 600 mg vial labeled: Reconstitute with 5 mL of sterile water for injection for final concentration of 600 mg/5 mL. The child's weight is 60#. How many mL will you draw up from this vial after reconstitution?

13. The order is for Amoxicillin 20 mg/kg/dose q8h. The patient weighs 20 kg. The supply is Amoxicillin 500 mg/2.5 mL

a. How many mL will the pt receive each dose? _____

b. How many mL will the patient receive each day? _____

14. Your patient has an order to receive 800 units of Heparin per hour by continuous intravenous infusion. If the pharmacy mixes the IV bag to contain a total of 5,000 units of Heparin in 500 ml of D5W, how many mL per hour should the patient receive?

15. A 500 mL solution of D5NS with 20,000 units of Heparin is infusing at 20ml per hour. The IV set delivers 60 gtts per mL. How many units of Heparin is the patient receiving each hour?

16. On Wednesday afternoon, your patient returns from surgery with an IV fluid order for 1000 mL every 8 hours. On Thursday morning at 8am, you assess that 600 ml of a 1L bag has been absorbed. The physician orders the remainder of that bag to infuse over the next 6 hours. You know that the IV tubing used by your unit delivers 10 gtt/ml. What will the correct rate of flow be?

17. You are ordered to give MgSO_4 20 g. The vial you have on hand provides strength of 50% MgSO_4 . How many ml will you give?

18. Your 3 month old client has a temperature of 38.5 C°. You have an order to administer 40 mg Infant's Tylenol po every 4-6 hrs for a temperature greater than 101 F°. Tylenol liquid is available as 80mg/0.8ml. Should you administer the medication as ordered? Why or why not? If so, what is the correct dose you should administer to this child?

19. Your patient has difficulty swallowing tablets so her physician ordered her medication in liquid form. She is to take 750 mg of her medication every 6 hrs. The medication is available as 250 mg/5 ml. How many tsp. should you tell her to take per dose? How many tsp. will she take per day?

20. A full term newborn infant weighs 8 lbs. 4 oz. A mother is bottle feeding this baby with formula. Bottle fed infants are typically fed approximately six times a day. As the nurse, you know that the caloric need of full term infants is 108 kcal/kg/day. You also know that commercial formula for term infants has 20 kcal/oz. How much formula (in ounces) per day can you tell the mother to expect to feed her new baby? How many ounces will she feed her baby per feeding?

21. Ordered: Tertbutaline 10ug/min for 30 minutes. Available: Tertbutaline 5 mg/500 mL in D5W. What should the pump be set for in mL/hr?

22. 30 Units of Pitocin are added to 500 mL D5LR for an induction. The client is receiving 45 mL/hr. How many U/hr of Pitocin is the client receiving?

23. Order: 2 g/hr of magnesium sulfate. Available: 25 g of 50% magnesium sulfate in 300 mL D5W. How many mL/hr would be needed to administer the required dose?

24. Order: Amoxicillin 100 mg po q6 hr. Child weighs 15 lbs. Safe range is 25 – 30 mg/kg/24 hr.

- a. What is the safe 24-hr range?
- b. Is the ordered dose safe for a 24-hr period?

25. Order: Digoxin 18 mcg po bid. Child weighs 7 lbs. The safe range is 10 – 12 mcg/kg/24 hrs.

- a. What is the safe 24-hr range?
- b. Is the ordered dose safe for a 24-hr period?
- c. If the medication is supplied 50 mcg/ml, how many ml will you administer per dose?