

## Medication Calculation Worksheet #1

1. An individual is taking cough suppressant that contains codeine 10 mg in 5 mL. If the individual took 12 tsp of the medication during a 24-hour period, how many milligrams of codeine would have been taken?

$$(5 \text{ mL} = 1 \text{ tsp})$$

$$5 \text{ mL} \times 12 \text{ tsp} = 60 \text{ mL}/12 \text{ tsp}$$

$$60 \text{ mL}/? \text{ mg} \times 10 \text{ mg}/5 \text{ mL} = 600/5$$

$$600/5 = 120 \text{ mg}$$

**ANSWER = 120 mg**

2. The nurse is to give 10 mcg/kg/min of a medication. The patient weighs 80 kg. How many mcg will the nurse give in 15 minutes?

$$10 \text{ mcg} \times 80 \text{ kg} \times 15 \text{ min} = 12,000 \text{ mcg}$$

**ANSWER = 12,000 mcg**

3. Calculate the individual dose in mg a medication to be administered in six divided doses if a patient weighs 35 pounds and is to be given 40 mg/kg/day. Round kg to nearest 10<sup>th</sup>.

$$35 \text{ lbs}/2.2 \text{ kg} = 15.9 \text{ kg}$$

$$40 \text{ mg} \times 15.9 \text{ kg} = 636 \text{ mg/kg}$$

$$636 \text{ mg}/6 \text{ doses} = 106 \text{ mg/dose}$$

**ANSWER = 106 mg**

4. The medication order is to administer naloxone (Narcan) 1.5 mcg/kg STAT. The child weighs 36.3 pounds. How many mg of Narcan will the nurse give to the child?

**Convert mcg to mg:**

$$1.5 \text{ mcg}/? \text{ mg} \times 1 \text{ mg}/1000 \text{ mcg} = 1.5 \text{ mg}/1000$$

$$1.5/1000 = 0.0015 \text{ mg}$$

**Convert lbs to kg:**

$$36.3 \text{ lbs}/2.2 \text{ kg} = 16.5 \text{ kg}$$

$$0.0015 \text{ mg} \times 16.5 \text{ kg} = 0.02 \text{ mg}$$

**ANSWER = 0.02 mg**

5. An individual is taking an antibiotic that contains penicillin (PCN) 180 mg in 5 mL. If the individual took 21 tsp of the medication in 7 days, how many milligrams of PCN would have been taken?

$$(1 \text{ tsp} = 5\text{mL})$$

$$180 \text{ mg} \times 21 \text{ tsp} = 3780 \text{ mg}$$

**ANSWER = 3780 mg**

6. Medication order: Cephalexin 375 mg PO tid. How many grams will the patient receive each 24 hours?

$$375 \text{ mg} \times 3 = 1,125 \text{ mg}$$

$$(1 \text{ g} = 1000 \text{ mg})$$

$$1,125 \text{ mg}/1000 = 1.125$$

**ANSWER = 1.1 g**

7. Medication order: Unipen 750 mg IM q6h  
Available: Unipen add 4 mL sterile water to make 1 g/2.5 mL  
How many mL of the reconstituted solution will you administer?

$$1 \text{ g} = 1000 \text{ mg}$$

$$750 \text{ mg}/? \text{ mL} \times 2.5 \text{ mL}/1000\text{mg} = 1.9 \text{ mL}$$

**ANSWER = 1.9 mL**

8. Medication order: Zaroxolyn 7.5 mg PO bid. Available: Zaroxolyn 5 mg tablets. How many tablets will you administer?

$$7.5 \text{ mg} \times 2 = 15 \text{ mg/daily}$$

$$15 \text{ mg}/5\text{mg} = 3 \text{ tablets/daily}$$

$$3 \text{ tablets}/2 = 1.5 \text{ tablets/dose}$$

**ANSWER = 3 tablets/daily and 1.5 tablets/dose**

9. Medication order: Erythromycin 125 mg via gastric tube tid. Available: Erythromycin 250 mg/5 mL. How many mL will you administer?

$$125 \text{ mg}/? \text{ mL} \times 5 \text{ mL}/250 \text{ mg} = 2.5 \text{ mL}$$

$$2.5 \text{ mL} \times 2 = 5 \text{ mL}$$

**ANSWER = 2.5 mL per dose and 5 mL daily**

10. Medication order: Capoten 100 mg. Available: Capoten 0.1 g tablets. How many tablets will you administer?

$$100 \text{ mg}/1000 = 0.1$$

$$0.1 \text{ g} = 1 \text{ tablet}$$

**ANSWER = 1 tablet**

11. Change 128 oz to L. Round final answer to a whole number.

$$128 \text{ oz}/? \text{ L} \times 30 \text{ mL}/1 \text{ oz} \times 1 \text{ L}/1000 \text{ mL} = 3.84 \text{ L}$$

**ANSWER = 4 L**

12. Medication order: heparin 2500 units/hr. Drug available: heparin 20,000 units in 250 mL D5W. At what rate will you set your pump?

$$2500 \text{ units}/? \text{ mL} \times 250 \text{ mL}/20,000 \text{ units} = 31.25 \text{ mL}$$

**ANSWER = 31.3 mL/hr**

13. Penicillin G Procaine (Wycillin) contains 300,000 units/mL. How many units would there be in 2.5 mL?

$$2.5 \text{ mL}/? \text{ units} \times 300,000 \text{ units}/1 \text{ mL} = 750,000 \text{ units}$$

**ANSWER = 750,000 units**

14. The pre-operative order is for atropine sulfate 0.15 mg. The supply of atropine sulfate is 0.4 mg/mL. How many mL will you prepare?

$$0.15 \text{ mg}/? \text{ mL} \times 1 \text{ mL}/0.4 \text{ mg} = 0.38 \text{ mL}$$

**ANSWER = 0.38 mL**

15. Medication order: Atropine 0.4 mg Sub-Q now. Drug available: atropine 5 mg per 10 mL. How many mL will you administer?

$$0.4 \text{ mg}/5 \text{ mg} \times 10 \text{ mL} = 0.8 \text{ mL}$$

**ANSWER = 0.8 mL**

16. Administer diphenhydramine 25 mg – 50 mg/kg/q 4 hours PRN allergic rhinitis. The patient weighs 130 lbs. What is the minimum and maximum amount in mgs that can be given per dose? (Do not round kg)

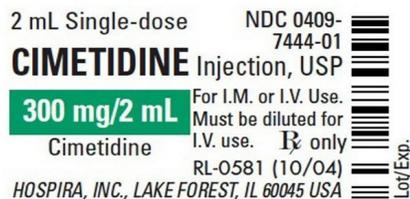
$$130 \text{ lbs}/2.2 \text{ kg} = 59.09 \text{ kg}$$

$$25 \text{ mg} \times 59.09 \text{ kg} = 1,477.3 \text{ mg}$$

$$50 \text{ mg} \times 59.09 \text{ kg} = 2,954.5 \text{ mg}$$

**ANSWER = 1,477.3 mg - 2,954.5 mg**

17. Administer Cimetidine 150 mg q 6 hrs by mouth for gastritis. How many mL will the nurse administer per day?



$$150 \text{ mg}/300 \text{ mg} \times 2 \text{ mL} = 1 \text{ mL}$$

$$1 \text{ mL} \times 4 \text{ times a day (q6 hrs)} = 4 \text{ mL}$$

**CALCULATION ANSWER = 4 mL**

**CORRECT ANSWER: I wouldn't administer this medication because the route on the label does not match the order given by the physician**

18. Administer 10 mg of a medication by mouth QID. Instructions on the 0.25 G label say to reconstitute with water to make a concentration of 0.5 g/3 mL. How many mL should the nurse administer per dose?

$$0.5 \text{ g}/? \text{ mg} \times 1000 \text{ mg}/1 \text{ g} = 500 \text{ mg}$$

$$10 \text{ mg}/? \text{ mL} \times 3 \text{ mL}/500 \text{ mg} = 0.06 \text{ mL}$$

**ANSWER = 0.06 mL/dose**

19. A pediatric patient is prescribed to receive 5 mg/kg/day of a medication, divided in two equal doses. If the child weighs 48 pounds, how much medication is the nurse supposed to administer? Round kg to 10ths. Do not round final answer.

$$48 \text{ lbs}/2.2 \text{ kg} = 21.8 \text{ kg}$$

$$5 \text{ mg} \times 21.8 \text{ kg} = 109 \text{ mg/kg}$$

$$109/2 = 54.5$$

**ANSWER = 54.5 mg/dose**

20. A client who weighs 187 lb has an order to receive enoxaparin (Lovenox) 1 mg/kg. This drug is available in a concentration of 30 mg/0.3 mL. What dose would the nurse administer in milliliters?

$$187 \text{ lb}/2.2 \text{ kg} = 85 \text{ kg}$$

$$1 \text{ mg} \times 85 \text{ kg} = 85 \text{ mg}$$

$$85 \text{ mg}/? \text{ mL} \times 0.3 \text{ mL}/30 \text{ mg} = 0.85 \text{ mL}$$

**ANSWER = 0.85 mL**

21. The physician orders ampicillin 100 mg/kg/ dose for a newly admitted neonate. The neonate weighs 1,350 g. How many milligrams should the nurse administer?

$$1350 \text{ g}/? \text{ kg} \times 1 \text{ kg}/1000 \text{ g} = 1.35 \text{ kg}$$

$$100 \text{ mg} \times 1.35 \text{ kg} = 135 \text{ mg}$$

**ANSWER = 135 mg/dose**

22. A patient with hypertensive emergency is being treated with sodium nitroprusside. In a dilution of 50 mg/250 mL, how many micrograms of are in each milliliter?

$$50 \text{ mg/? mcg} \times 1000 \text{ mcg/1 mg} = 50,000 \text{ mcg}$$

$$50,000 \text{ mcg/250 mL} = 200 \text{ mcg}$$

**ANSWER = 200 mcg/mL**

23. Administer ampicillin sodium 125 mg IVP (IV Push) every 6 hours. Reconstitute with 7.4 mL of bacteriostatic water to yield 1 g/7.4 mL. The nurse should draw up how many mL per dose? Round answer to the 10ths.

$$(1\text{g} = 1000 \text{ mg})$$

$$125 \text{ mg/? mL} \times 7.4 \text{ mL/1000 mg} = 0.925 \text{ mL}$$

**ANSWER = 0.9 mL/dose**

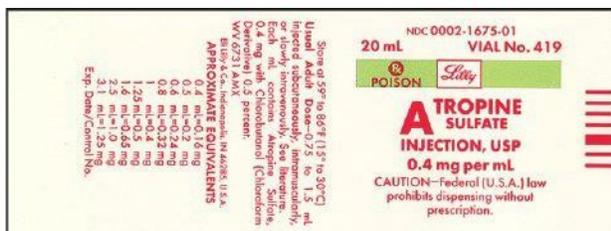
24. Administer digoxin 8 mcg/kg/qd. The patient weighs 7.2 kg. The health care provider (HCP) prescribes the digoxin to be given twice daily. How many mcg of digoxin to administer to the patient at each dose? Do not round.

$$8 \text{ mcg} \times 7.2 \text{ kg} = 57.6 \text{ mcg}$$

$$57.6 \text{ mcg}/2 = 28.8 \text{ mcg}$$

**ANSWER = 28.8 mcg/dose**

25. Administer Atropine sulfate, 0.6 mg IM. How many mL should the nurse administer?



$$0.6 \text{ mg/? mL} \times 1 \text{ mL}/0.4 \text{ mg} = 1.5 \text{ mL}$$

**ANSWER = 1.5 mL**