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?

$$\frac{12\ tsp}{1} \times \frac{5\ mL}{1\ tsp} \times \frac{10\ mg}{5\ mL} = \frac{120}{1} = \boxed{120\ mg}$$

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?

$$\frac{10\ mcg}{1\ Kg} \times \frac{80\ Kg}{1\ min} = \frac{800\ mcg}{1\ min} \times 15\ min = \boxed{12,000\ mcg}$$

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 10th. TYPO?

$$\frac{35\ lbs}{1} \times \frac{1\ Kg}{2.2} \times \frac{40\ mg}{1\ Kg} = \frac{1400}{2.2} = 636.4 / 6 = \boxed{106.1\ mg}$$

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?

$$\frac{36.3\ lbs}{1} \times \frac{1\ Kg}{2.2\ lb} \times \frac{1.5\ mcg}{1\ Kg} \times \frac{1\ mg}{1000\ mcg} = \frac{54.45}{2,200} = \boxed{0.02\ mg}$$

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?

$$\frac{21\ tsp}{1} \times \frac{5\ mL}{1\ tsp} \times \frac{180\ mg}{5\ mL} = \frac{18,900}{5} = \boxed{3,780\ mg}$$

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

$$\frac{375\ mg}{1} \times \frac{1\ g}{1000\ mg} = \frac{375}{1000} = .375 \times 3 = \boxed{1.1\ g}$$

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?

$$\frac{750\ mg}{1} \times \frac{1\ g}{1000\ mg} \times \frac{2.5\ mL}{1\ g} = \frac{1875}{1000} = \boxed{1.9\ mL}$$

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

$$\frac{7.5\,mg}{1} \times \frac{1\,tab}{5\,mg} = \frac{7.5}{5} = \boxed{1.5\,tabs}$$

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

$$\frac{125\,mg}{1} \times \frac{5\,mL}{250\,mg} = \frac{625}{250} = \boxed{2.5\,mL}$$

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

$$\frac{100\,mg}{1} \times \frac{1\,g}{1000\,mg} \times \frac{1\,tab}{0.1\,g} = \frac{100}{100} = \boxed{1\,tab}$$

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

$$\frac{128\,oz}{1} \times \frac{30\,mL}{1\,oz} \times \frac{1\,L}{1000\,mL} = \frac{3840\,L}{1000\,mL} = \boxed{4\,L}$$

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?

$$\frac{D\,V}{H} \qquad \frac{2500\,(250)}{20,000} = \boxed{31.25\,units/hr}$$

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

$$300,000 \times 2.5 = \boxed{750,000\,units}$$

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?

$$\frac{0.15\,mg}{1} \times \frac{1\,mL}{0.4\,mg} = \frac{0.15}{0.4} = \boxed{0.38\,mL}$$

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

$$\frac{0.4\,mg}{1} \times \frac{10\,mL}{5\,mg} = \frac{4}{5} = \boxed{0.8\,mL}$$
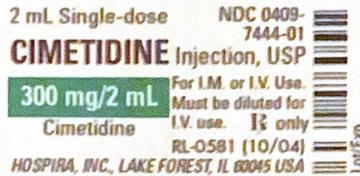
16. Administer diphenhydramine 25 mg – 50 mg/kg/q 4 hours PRN allergic rhinitis. The patient weighs 130 lbs. What is the minimum and maximum amount in mgs that can be given per dose? (Do not round kg)

$$\frac{130 \text{ lbs}}{1} \times \frac{1 \text{ Kg}}{2.2 \text{ lbs}} \times \frac{25 mg}{1 kg} = \quad \text{minimum} = \boxed{1,477 \, mg}$$
$$\text{maximum} = \boxed{2,954 \, mg}$$

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

2 mL Single-dose   NDC 0409-7444-01
CIMETIDINE Injection, USP
300 mg/2 mL   For I.M. or I.V. Use. Must be diluted for
Cimetidine   I.V. use. R only
RL-0581 (10/04)
HOSPIRA, INC., LAKE FOREST, IL 60045 USA

$$\frac{150 \, mg}{1} \times \frac{2 mL}{300 mg} = \frac{300}{300} = 1 mL$$

$$\boxed{4 \, mL/day}$$

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?

$$\frac{10 \, mg}{1} \times \frac{1 g}{1000 mg} \times \frac{3 mL}{0.5 g} = \frac{30}{500} = \boxed{0.06 \, mL}$$

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.

$$\frac{48 \, lbs}{1} \times \frac{1 Kg}{2.2 lbs} \times \frac{5 mg}{1 kg} = \frac{240}{2.2} = \frac{109.1 \, mg}{2} = \boxed{54} \, mg/dose$$

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?

$$\frac{187 \, lbs}{1} \times \frac{1 Kg}{2.2 lbs} \times \frac{1 mg}{1 kg} \times \frac{0.3 mL}{30 mg} = \frac{56.1}{66} = \boxed{0.85 \, mL}$$

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?

$$\frac{1350 \, g}{1} \times \frac{0.001 Kg}{1 g} \times \frac{100 mg}{1 kg} = \boxed{135 \, mg}$$

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?

$50 \times 1000 = 50,000\ mcg$

$50,000\ mcg / 250\ mL$

$\boxed{200\ mcg\ |\ 1\ mL}$

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.

$$\frac{125\ mg}{1} \times \frac{1\ g}{1000\ mg} \times \frac{7.4\ mL}{1\ g} = \frac{925}{1000} = \boxed{0.9\ mL}$$

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.

$$\frac{7.2\ kg}{1} \times \frac{8\ mcg}{1\ kg} = \boxed{57.6\ mcg}$$

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

NDC 0002-1675-01
20 mL   VIAL No. 419
POISON   *Lilly*
A TROPINE SULFATE
INJECTION, USP
0.4 mg per mL
CAUTION—Federal (U.S.A.) law prohibits dispensing without prescription.

$$\frac{0.6\ mg}{1} \times \frac{1\ mL}{0.4\ mg} = \frac{0.6}{0.4} = \boxed{1.5\ mL}$$