

## Dosage 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?

$$5 \text{ mL} \times \frac{1 \text{ tsp}}{5 \text{ mL}} = 1 \text{ tsp}$$

$$\frac{10 \text{ mg}}{\text{tsp}} \times 12 \text{ tsp} = 120 \text{ mg}$$

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?

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

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>.

$$35 \text{ lbs} \times \frac{1 \text{ kg}}{2.2 \text{ lbs}} = 15.9 \text{ kg} \quad \frac{40 \text{ mg}}{\text{kg} \times \text{day}} \times 15.9 \text{ kg} = 636 \text{ mg} \div 6 = 106 \text{ mg}$$

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?

$$36.3 \text{ lbs} \times \frac{1 \text{ kg}}{2.2 \text{ lbs}} = 16.5 \text{ kg}$$

$$1.5 \text{ mcg} \times \frac{1 \text{ mg}}{1000 \text{ mcg}} = \frac{0.0015 \text{ mg}}{\text{kg}} \times 16.5 \text{ kg} = 0.02475 \text{ mg} = 0.02 \text{ mg}$$

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?

$$5 \text{ mL} \times \frac{1 \text{ tsp}}{5 \text{ mL}} = 1 \text{ tsp}$$

$$\frac{180 \text{ mg}}{\text{tsp}} \times 21 \text{ tsp} = 3,780 \text{ mg}$$

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

$$375 \text{ mg} \times \frac{1 \text{ g}}{1000 \text{ mg}} = 0.375 \text{ mg} \times 3 = 1.125 \text{ g} = 1.1 \text{ g}$$

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?

$$1 \text{ g} \times \frac{1000 \text{ mg}}{1 \text{ g}} = 1000 \text{ mg} \quad \frac{1000 \text{ mg}}{2.5 \text{ mL}} = \frac{750 \text{ mg}}{x}$$

$$1000x = 1875 = 1.875 \text{ mL} = 1.9 \text{ mL PER DOSE}, 7.6 \text{ mL PER DAY}$$

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

$$\frac{5 \text{ mg}}{\text{tab}} = \frac{7.5 \text{ mg}}{x} \quad 5x = 7.5 = 1.5 \text{ tab PER DOSE}, 3 \text{ tabs PER DAY}$$

9. Medication order: Erythromycin 125 mg via gastric tube tid. Available: Erythromycin 250 mg/5 mL

How many mL will you administer?

$$\frac{250 \text{ mg}}{5 \text{ mL}} = \frac{125 \text{ mg}}{x} \quad 250x = 625 = 2.5 \text{ mL PER DOSE}, 7.5 \text{ mL PER DAY}$$

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

$$0.1 \text{ g} \times \frac{1000 \text{ mg}}{1 \text{ g}} = 100 \text{ mg} \quad \frac{100 \text{ mg}}{\text{tab}} = \frac{100 \text{ mg}}{x} \quad 100x = 100 = 1 \text{ tab}$$

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

$$128 \text{ oz} \times \frac{30 \text{ mL}}{1 \text{ oz}} = 3840 \text{ mL} \times \frac{1 \text{ L}}{1000 \text{ mL}} = 3.84 \text{ L} = 4 \text{ L}$$

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?

$$\frac{250 \text{ mL}}{20,000 \text{ u}} \times \frac{2500 \text{ u}}{1 \text{ hr}} = 31.25 \text{ mL/hr}$$

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

$$\frac{300,000 \text{ u}}{1 \text{ mL}} = \frac{x}{2.5 \text{ mL}} = 1x = 750,000 = 750,000 \text{ units}$$

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

$$\frac{0.4 \text{ mg}}{\text{mL}} = \frac{0.15 \text{ mg}}{x} \quad 0.4x = 0.15 = 0.375 \text{ mL} = 0.4 \text{ mL}$$

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

$$\frac{5 \text{ mg}}{10 \text{ mL}} = \frac{0.4 \text{ mg}}{x} \quad 5x = 10 = 2 \text{ mL}$$