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$\frac{4000 \times 500mL}{25{,}000} = 80$

Dosage Calculation Worksheet #3

$\frac{\text{infuse mass}}{\text{order mass}} \times \text{volume} = \frac{4000}{25000} \times 500 = 80$

1. Medication order: Heparin 25,000 units in 500 mL, infuse 4000 units/hr. How many mL per hour do you need to infuse to deliver 4000 units/hr?

25,000 units = 500mL 25,000 ÷ 500mL = 50

4,000 units = 80mL 4000 ÷ 50 = 80

80mL/hr

2. Medication order: Lidocaine 8 mg in 250 mL, infuse at 10 mcg/min. How many mL per hour do you need to infuse to deliver 10 mcg/min?

8mg / 250mL

$\frac{10mcg}{8000mcg} \times 250mL$ $\frac{10mcg}{10mcg}$

$\frac{10mcg \times 250mL}{8000mcg} = 0.31mL/min$

18.8mL/hour

3. Medication order: Aminophylline 1 gram in 250 mL, infuse 25 mg/hr. How many mL per hour must you infuse to deliver 25 mg/hr?

$\frac{\text{Desired mass}}{\text{mass}} \times \text{volume}$ $\frac{25mg}{1000mg} \times 250mL = 6.25mL/hr$

≈ 6.3mL/hr

4. Medication on hand: Insulin 75 units in 125 mL. How many units per mL?

DV / H

$\frac{75units \times 1mL}{125mL} = 0.6units$

75units / 125mL

0.6units / 1mL

5. Medication order: Unipen 750 mg IM q6h. Available: Unipen 1 g/2.5 mL after it has been reconstituted. How many mL of the reconstituted solution will you administer? Round answer to the nearest tenth.

DV / H

0: 750mg

OH: 1g / 2.5mL

1000mg

$\frac{750mg \times 2.5mL}{1000mg} = 1.875$

≈ 1.9mL

Volume/time

6. A nurse is administering an antibiotic via IVPB. The pharmacy dispenses 150 milligrams (mg) of antibiotic mixed in 250 milliliters (mL) of normal saline to infuse over 30 minutes. The nurse will set the infusion pump at 500 mL/hour to administer the IVPB.

V/T= mL/hr 250mL/30min 250mL x 2 = 500mL/hr 250mL/.5 = 500mL/hr

7. Administer 3.5 mL of aminophylline liquid (250 mg/2.5mL) PO for pain now. The nurse will administer [1] milligrams.

DV/H Order: 3.5mL OH: 250mg/2.5mL $\frac{3.5\text{mL} \times 250\text{mg}}{2.5\text{mL}} = 350\text{mg}$

8. Order: Administer cephazolin 60 mg IM daily. Available is a 5 mL vial of cephazolin 100 mg/mL. The nurse should administer how many mL?

DV/H O: 60mg OH: 100mg/mL $\frac{60\text{mg} \times 1\text{mL}}{100\text{mg}} = 0.6\text{mL}$

7 to 4 = 9-1 = 8

9. From 0700 to 1600 the nurse calculates the patient's total intravenous fluid intake as [1] milliliters. An IV is infusing at 150 mL/hour. At 1200, the patient will receive IVPB of 75 mL for 30 minutes. What is the total amount the patient will receive during this time?

8 x 150 = 1,200mL 8 hrs 75mL 30min 75mL 30min = 1350mL

10. Administer 5 milligrams of acyclovir in 75 milliliters of normal saline over 15 minutes. The nurse will set the IV pump at [1] mL/hour.

x4

5mg/75mL 15min 75 x 4 = 300 mL/hr.

V/T=mL/hr

11. Phenytoin (Dilantin), 7,000,000 mcg PO, is ordered to be given through a nasogastric tube. Phenytoin is available as 5,000 mg / 18 mL. How much would the nurse administer? Round to a whole number.

O: 7,000,000mcg = 7000mg

OH: 5000mg / 18mL

$\frac{7000mg \times 18mL}{5000mg} = 25mL$

12. Solumedrol 1.5 mg/kg is ordered for a patient weighing 74.8 lb. Solumedrol is available as 125 mg / 2mL. How many mL should the nurse administer?

O: 1.5mg/kg

OH: 125mg/2mL

74.8lbs = 34

1.5mg X 34kg = 51mg

$\frac{51mg \times 2mL}{125mg} = 0.8mL$

13. Give patient 24.4 mg of dopamine in 363 mL of D5W to be infused at a rate of 9,818 mcg/hr. Calculate the flow rate in mL/hr.

$\frac{\text{desired mass}}{\text{mass}} \times \text{volume}$

$\frac{9.818mg}{24.4mg} \times 363mL = 146.1mL/hr$

14. Give patient 10.1 mg of dopamine in 251 mL of D5W to be infused at a rate of 6 mg/hr. Calculate the flow rate in mL/hr.

$\frac{6mg}{10.1mg} \times 251mL = 149.1mL/hr$

15. Ordered Lasix 12,000,000 mcg IV push now. Available: 0.025 kg in 15 mL. How much will the nurse draw up?

12,000,000 mcg

12,000 mg

12 g

0.012 kg

$\frac{0.012kg \times 15mL}{0.025kg} = 7.2mL$