Kaylee Rodriguez

Dosage Calculation Worksheet #3

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?

   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?

   19mL/hr

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?

   6mL/hr

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

   0.6 units/mL

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.

   1.9 mL

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.

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

   350 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?

   0.6 mL

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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?

1350 mL

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.

300 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.

25 mL

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?

0.8 mL

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.

146 mL/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.

149 mL/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?

7,200,000 mL

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Dosage Calculation #3

1. D: 4,000 units/hr $\frac{DV}{H}$
   H: 25,000 units/500 mL

   $\frac{4,000 \cdot 500}{25,000}$ = (80 mL/hr)

2. D: 10 mcg/min = 600 mcg/hr $\frac{DV}{H}$
   H: 8 mg/250 mL   8,000 mcg/250 mL

   10 × 60 = 600 mcg   1 × 60 min = 1 hr

   $\frac{600 \cdot 250}{8,000}$ = 18.75 mL = (19 mL/hr)

3. D: 25 mg/hr $\frac{DV}{H}$
   H: 1 g/250 mL = 1,000 mg/250 mL

   $\frac{25 \cdot 250}{1,000}$ = 6.25 mL = (6 mL)

4. 75 units/125 mL

   75 ÷ 125 = (0.6 units/mL)

5. D: 750 mg $\frac{DV}{H}$
   H: 1 g/2.5 mL   1,000 mg/2.5 mL

   $\frac{750 \cdot 2.5}{1,000}$ = 1.875 mL = (1.9 mL)

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6. 150 mg / 250 mL over 30 minutes
        x 2   x 2
         500 mL   60 minutes
   500 mL / hr

7. D:? mg / 3.5 mL
   H: 250 mg / 2.5 mL   350 mg

   250 ÷ 2.5 = 100 mg / mL
         x 3.5   x 3.5
         350 mg / 3.5 mL

8. D: 60 mg $\frac{D V}{H}$
   H: 100 mg / mL

   $\frac{60 \cdot 1}{100}$ = 0.6 mL

9. 0700 - 1200 = 5hr   1200 - 1300 = 1 hr
   150 mL / hr   30 min = 75 mL pb
   x 5   x 5   150 mL / hr
   750 mL   2   2
                 75 mL / 30 min
                 75 mL pb + 75 mL IV
                    150 mL
   1300 - 1600 = 3 hr   1
   150 mL / hr   750
   x 3   x 3   150
   450 mL / 3 hr   + 450
                    1350 mL

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10. 5 mg / 75 mL over 15 minutes
   ×4   ×4
   300 mL   60 min
   (300 mL/hr)

11. D: 7,000,000 mcg
    H: 5,000 mg / 18 mL   5,000,000 mcg /18mL

    $\dfrac{7,000,000 \cdot 18}{5,000,000}$ = 25.2 mL = (25 mL)

12. 1.5 mg/kg   51 mg
    125 mg / 2 mL
    74.8 lbs = ? kg   34 kg $\dfrac{DV}{H}$

    1.5 × 34 = 51 mg $\dfrac{51 \cdot 2}{125}$ 0.816 mL = (0.8 mL)

13. 24.4 mg / 363 mL
    9,818 mcg / X mL

    $\dfrac{24,400 \text{ mcg}}{363 \text{ mL}} \times \dfrac{9,818 \text{ mcg}}{X \text{ mL}}$ 146.06
    24,400 X = 3,563,934 ÷ 24,400 = (146 mL)

14. 10.1 mg / 251 mL = $\dfrac{10.1 \text{ mg}}{251 \text{ mL}} \times \dfrac{6 \text{ mg}}{X \text{ mL}}$
    6 mg / X mL
                        10.1 x = 1,506 ÷ 10.1 = 149.10
    (149 mL)

15. D: 12,000,000 mcg   12,000 mg
    H: 0.025 mg / 15 mL
    $\dfrac{12,000 \cdot 15}{0.025}$ (7,200,000 mL)