Module 1-10 questions Module 2-10 questions Worksheet

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1. Infuse ceftriaxone 1 gram over 45 minutes. The drug is supplied as 1gram/50ml. The drip factor is 15. How many gtt/min will you infuse? $\frac{mL \times gtt}{time}$

$\frac{50\,mL \times 15}{45} = \frac{750}{45} = 16.6 = \boxed{17\ gtt/min}$

2. The physician writes an order to give 1000mL of normal saline over 8hrs. How many mL/hr will you infuse?

$1000/8 = \boxed{125\ mL/hr}$

3. Infuse vancomycin hydrochloride 1.5 gram over 3 hours. The drug is supplied as 1.5 gram/250mL. The drip factor is 15. How many gtt/min will you infuse? $\frac{250\,mL \times 15\,gtt}{180}$

$\frac{3750}{180} = 20.8 = \boxed{21\ gtt/min}$

4. An order has been written to give cefazolin 1gram over 30 minutes. The drug is supplied as 1 gram/50mL. The gtt factor is 60. How many gtt/min will you infuse?

$\frac{50\,mL \times 60\,gtt}{30\,min}$ $\frac{3000}{30}$ $\boxed{100\ gtt/min}$

KHDMDCM

5. The nurse is to give Ciprofloxacin 500mg IV over 1 hr. The drug is supplied as 1gram/250mL. The gtt factor is 15. How many gtt/min will you infuse?

$1000\,mg/500\,mg = 2$ $\frac{250\,mL \times 15\,gtt}{60} = \frac{3750}{60} = \frac{62.5}{2} = 31.25 = \boxed{31\ gtt/min}$

6. An order is received for Fentanyl 75mcg IV now. The drug is supplied as 100mcg/2mL. How many mL will you give? $\frac{DV}{H} = \frac{75\,mcg \times 2\,mL}{100\,mcg} = \frac{150\,mcg}{100\,mcg} = \boxed{1.5\,mL}$

7. Infuse 1000 mLs normal saline over 4 hrs. How many mL/hr will you set on the pump?

$1000mL/4hr = \boxed{250\,mL/hr}$

8. The patient is to receive metoprolol 5mg for chest pain. The drug is supplied as 20mg/5mL. How many mL will you give? (Do not round your final answer)

$\frac{DV}{H}$ $\frac{5mg \times 5mL}{20\,mg} = \frac{25\,mg/mL}{20\,mg} = \boxed{1.25\,mL}$

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9. The order is to give midazolam 2mg IV now. The drug is supplied as 10mg/mL. How many mL will you give? $\frac{DV}{H}$ $\frac{2\text{mg} \times 1\text{mL}}{10\text{mg}} = \frac{2\text{mg/mL}}{10\text{mg}} = \boxed{0.2\text{mL}}$

10. Infuse Doripenem 500mg IV over 8 hrs. The drug is supplied as 500mg/100mL. The drip factor is 60. How many gtt/min will you infuse? $\frac{\text{mL} \times \text{gtt}}{\text{time}}$ $\frac{100\text{mL} \times 60\text{gtt}}{480} = \frac{6000}{480} = 12.5\ \text{gtt/min} = \boxed{13\ \text{gtt/min}}$

Worksheet 2

1. The patient is receiving Nipride, currently infusing at 142 mL/hr. The IV bag of Nipride reads 50 mg in 500 mL D5W. The patient weighs 175 lbs. How many mcg/kg/min are infusing? Round to the nearest tenth. want mcg x 1000

$175/2.2 = 79.5\text{kg}$ concentration = 100 mcg/mL

mg/mL $50/500 = 0.1$

$\frac{100\text{mcg} \times 142\text{mL/hr}}{79.5 \times 60} = \frac{14{,}200}{4{,}770} = 2.97 = \boxed{3}$ mcg/kg/min

Dose x wt (kg) x 60 / Drug Con

2. The physician has ordered Dobutrex for a patient. The order states to start the Dobutrex at 1 mcg/kg/min, and titrate as needed. The IV bag of Dobutrex contains 250 mg in 500 mL D5W. The patient weighs 70 kg. How many mL/hr should the IV pump be set at to achieve the starting dose? Round to the nearest whole number. x 1000 / 100

$\frac{\text{Dose} \times \text{wt} \times 60}{\text{con}}$ $\frac{1\text{mcg} \times 70 \times 60}{500\text{mcg}}$ $\frac{4{,}200}{500} = \boxed{8.4\text{mL/hr}} = \boxed{8\text{mL/hr}}$

Drug concentration = $250/500 = 0.5 \times 1000$ = 500 mcg/mL

3. The patient is currently receiving Nitroglycerine at 12 mL/hr. The bottle reads 100 mg Nitroglycerine in 250 mL D5W. How many mcg/min is the patient receiving?

$\frac{400 \times 12}{60} = \frac{4800}{60} = \boxed{80\ \text{mcg/min}}$

$100\text{mg}/250\text{mL} = 0.4 \times 1000 = 400\text{mg/mL}$

4. The physician orders Heparin infusion at 500 units/hr. The bag of Heparin reads 25,000 units in 250 mL D5W. How many mL/hr should be showing on the IV pump?

$\frac{DV}{H}$ $\frac{500 \times 250}{25{,}000} = \frac{125{,}000}{25{,}000} = \boxed{5\text{mL/hr}}$

5. The physician has ordered Dopamine to start at 2 mcg/kg/min. The patient weighs 165 lbs. The bag of Dopamine reads 800 mg in 500 mL D5W. What rate would the nurse set on the infusion pump? Round to the nearest tenth. 75kg

$800/500 = 1.6 \times 1000 = 1600$

$\frac{2 \times 75 \times 60}{1600}$ $\frac{9000}{1600} = \boxed{5.6}$

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6. The physician in the previous questions has now written an order to increase the Dopamine to 4 mcg/kg/min. Using the information in the previous question, what rate would the nurse set on the IV pump? Round to the nearest tenth.

$\frac{4 \times 75\,kg \times 60}{1600} = \frac{18\,000}{1600} = 11.25 = \boxed{11.3}$

7. The patient is on an Insulin drip infusing at 5 units/hr. The bag is labeled 100 units insulin in 250 mL NS. At what rate should the pump be infusing? Round to the nearest whole number.

$\frac{5 \times 250}{100} \quad \frac{1250}{100} = 12.5 = \boxed{13}$

8. The patient is on a Dopamine drip infusing at 35 mL/hr. The label reads 400 mg dopamine in 500 mL D5W. The patient weighs 62 kg. How many mcg/kg/min is the patient receiving? Round to the nearest tenth.

$\frac{con \times rate}{Kg \times 60}$

$400/500 = 0.8 \times 1000 = 800\,mcg/mL$

$\frac{35 \times 62 \times 60}{800} = \frac{130,200}{800} = \text{[illegible]}$

$\frac{800 \times 35}{62 \times 60} \quad \frac{28,000}{3720} = \boxed{7.5\ mcg/kg/min}$

9. The physician has ordered Rocephin 1 gram IV over 30 minutes. Pharmacy has sent a bag labeled Rocephin 1 gram in 50 mL/ D5W. The IV tubing delivers 15 gtt/mL. How many drops per minute (gtt/min) will the nurse deliver?

$\frac{50\,mL \times 15\,gtt/mL}{30} = \frac{750}{30} = \boxed{25\,gtt/min}$

10. The patient is to receive Cipro 400 mg IV over 1 hour. You receive a bag from the pharmacy labeled Cipro 400 mg in 100 mL D5W. The IV tubing delivers 12 gtt/mL. How many drops per minute (gtt/min) will the nurse deliver?

$\frac{100\,mL \times 12\,gtt}{60\,min} = \frac{1200}{60} = \boxed{20\,gtt/min}$