

DRUG DOSE CALCULATION AND IV DRIP RATE CALCULATION

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Tablet dosage

FORMULA:

DESIRED DOSE ÷ STOCK STRENGTH = NUMBER OF TABLET

- **DESIRED DOSE= PRESCRIBED DOSE**
- **STOCK STRENGTH= EACH TABLET CONTENT**

- **Order: Erythromycin 750 mg**
On hand: Erythromycin 250 mg capsules
- **DESIRED DOSE = 750 mg**
STOCK STRENGTH = 250 mg
- **$750 \text{ mg} \div 250 \text{ mg} = 3$**
- **Answer: 3 capsules**

- **Order: Digoxin 0.25 mg**
On hand: Digoxin 0.125 mg tablets

DESIRED DOSE = 0.25 mg
STOCK STRENGTH = 0.125 mg

- **$0.25 \text{ mg} \div 0.125 \text{ mg} = 2$**
- **Answer: 2 tablets**

INJECTION, MIXTURE OR SOLUTION DOSAGE

FORMULA:

DESIRED DOSE ÷ STOCK STRENGTH X STOCK VOLUME= AMOUNT OF SOLUTION TO BE GIVEN

- **DESIRED DOSE= PRESCRIBED DOSE**
- **STOCK STRENGTH= EACH VIAL OR AMPULE CONTENT**
- **STOCK VOLUME= TOTAL VOLUME IN VIAL OR AMPULE**

- **Order: Acetaminophen 500 mg**
On hand: Acetaminophen 250 mg in 5 mL

DESIRED DOSE = 500 mg

STOCK STRENGTH = 250 mg

STOCK VOLUME = 5 mL

$500 \text{ mg} \div 250 \text{ mg} \times 5 \text{ mL} = 10 \text{ mL}$

- **Answer: 10 mL**

- **Order: 7000 IU IM medicine**
On hand: 10000 IU in 2 mL

DESIRED DOSE = 7000 IU

STOCK STRENGTH = 10000 IU

STOCK VOLUME = 2 mL

$7000 \text{ IU} \div 10000 \text{ IU} \times 2 \text{ mL} = 1.4 \text{ mL}$

- **Answer: 1.4 mL**

IV RATE

- **FORMULA:**
- **TOTAL IV VOLUME ÷ TIME [HOUR OR MINUTE]=ML PER HOUR OR MINUTE**
- **TOTAL IV VOLUME= PRESCRIBED VOLUME**
- **TIME [HOUR OR MINUTE]= 1 HOUR OR 60 MINUTE**

- **Order: 2 unit of IV NS**
- **Time: 10 hours**
- **$1000 \text{ mL} \div 10 = 100 \text{ OR}$**
- **$1000\text{mL} \div 600 = 1.66$**
- **Answer: 100ml per hour or 1.66 ml per minute**

DROPS PER MINUTE

- **FORMULA:**
- **[TOTAL IV VOLUME ÷ TIME IN MINUTE] X DROP FACTOR=DROPS PER MINUTE**
- **TOTAL IV VOLUME= PRESCRIBED VOLUME IN PARTICULAR TIME**
- **TIME IN MINUTE=PRESCRIBED TIME IN MINUTE**
- **DROP FACTOR= 20 GTT**

- **Order: 70 ml per hour**
- **Time in minute: 60 minute**
- **Drop factor: 20 gtt**
- **[70ml ÷ 60 minute] X 20 = 23.33**
- **Answer: 23.33 drops per minute**

Math

can be related to our lives

It teach us to always be
careful with the signs

Lets reduce the medication errors

Thank You