se studies

	PRN Medications		
	IV Therapy		
4/29/XX	Ampicillin 500 mg IV bolus one time		
4/29/XX	Magnesium Sulfate 4 g IV bolus now to run over 30 min		
4/29/XX	Magnesium Sulfate 2 g/hr by continuous IV infusion		
4/29/XX	Lactated Ringers 125 mL/hr by continuous IV infusion		
Signature		Date	

Q

A nurse is converting a client's weight from pounds to kilograms. What is the client's weight in kilograms?

(Review the MAR. Round the answer to the nearest tenth.)

☑ 64.1

Step 1

What is the unit of measurement the nurse should calculate? (Place the unit of measure being calculated on the left side of the equation.)

$X \text{ kg} =$

Step 2

Find the ratio in the item that contains the same unit as the unit being calculated. (Place the ratio on the right side of the equation, ensuring that the unit in the numerator matches the unit being calculated.)

$X \text{ kg} = \dfrac{1 \text{ kg}}{2.2 \text{ lb}}$

Case studies

A nurse is calculating the dosage of nifedipine. How many tablets should the nurse administer?

(Review the MAR. Move the number of tablets the nurse should administer into the medication cup. Then click "Submit.")

Store below 86°F. (30°C).
PROTECT FROM MOISTURE AND HUMIDITY.
Dispense in tight containers (USP)

DOSAGE AND USE
See accompanying prescribing information.

*Each tablet contains 33 mg nifedipine to
provide a 30 mg dose.

Rx only.

100 Tablets

NIFEDIPINE
extended release

30 mg GITS*

☑ 1

A nurse is calculating the dosage of magnesium sulfate IV bolus. Available is magnesium sulfate 4 g in D$_5$W 50 mL. The nurse should set the IV pump to deliver how many mL/hr?

(Review the MAR. Round the answer to the nearest whole number.)

✓ 100

Step 1
What is the unit of measurement the nurse should calculate? (Place the unit of measure being calculated on the left side of the equation.)

$$X \text{ mL/hr} =$$

Step 2
Find the ratio in the item that contains the same unit as the unit being calculated. (Place the ratio on the right side of the equation, ensuring that the unit in the numerator matches the unit being calculated.)

$$X \frac{\text{mL}}{\text{hr}} = \frac{50 \text{ mL}}{30 \text{ min}}$$

Step 3
Place any remaining ratios that are relevant to the item on the right side of the equation along with any needed conversion factors to cancel out unwanted units of measure.

$$X \text{ mL/hr} = \frac{50 \text{ mL}}{30 \cancel{\text{ min}}} \times \frac{60 \cancel{\text{ min}}}{1 \text{ hr}}$$
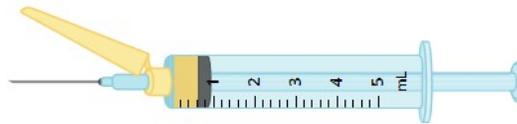
Step 4
Solve for X.

A nurse is calculating the dosage of betamethasone. How many milliliters should the nurse administer?

(Review the MAR and medication label. Measure the correct dose of the medication by dragging the syringe. Then click "Submit.")

BETAMETHASONE
Injectable Suspension,
USP

30 mg/5 mL
5 mL MULTIPLE
DOSE VIAL

Sterile
Rx only

2

Step 1

What is the unit of measurement the nurse should calculate? (Place the unit of measure being calculated on the left side of the equation.)

A nurse is calculating the IV flow rate for ampicillin. Available is ampicillin 500 mg in 0.9% NaCl 100 mL to run over 30 min. The nurse should administer how many mL/hr?

(Review the MAR. Round the answer to the nearest whole number.)

✓ 200

Step 1
What is the unit of measurement the nurse should calculate? (Place the unit of measure being calculated on the left side of the equation.)

$$X \text{ mL/hr} =$$

Step 2
Find the ratio in the item that contains the same unit as the unit being calculated. (Place the ratio on the right side of the equation, ensuring that the unit in the numerator matches the unit being calculated.)

$$X \text{ mL/hr} = \frac{100 \text{ mL}}{30 \text{ min}}$$

Step 3
Place any remaining ratios that are relevant to the item on the right side of the equation along with any needed conversion factors to cancel out unwanted units of measure.

$$X \text{ mL/hr} = \frac{100 \text{ mL}}{30 \ \cancel{\text{min}}} \times \frac{60 \ \cancel{\text{min}}}{1 \text{ hr}}$$

Step 4
Solve for X.

A nurse is calculating the dosage of magnesium sulfate IV by continuous infusion. Available is magnesium sulfate 20 g in D$_5$W 500 mL. The nurse should set the IV pump to deliver how many mL/hr?

(Review the MAR. Round the answer to the nearest whole number.)

✓ 50

Step 1

What is the unit of measurement the nurse should calculate? (Place the unit of measure being calculated on the left side of the equation.)

$$X \text{ mL/hr} =$$

Step 2

Find the ratio in the item that contains the same unit as the unit being calculated. (Place the ratio on the right side of the equation, ensuring that the unit in the numerator matches the unit being calculated.)

$$X \text{ mL/hr} = \frac{500 \text{ mL}}{20 \text{ g}}$$

Step 3

Place any remaining ratios that are relevant to the item on the right side of the equation along with any needed conversion factors to cancel out unwanted units of measure.

$$X \text{ mL/hr} \quad \frac{500 \text{ mL}}{} \quad \frac{2 \text{ g}}{}$$

A nurse is calculating the dosage of hydralazine. How many milliliters should the nurse administer?

(Review the MAR and medication label. Round the answer to the nearest hundredth.)

HydrALAZINE
Hydrochloride
Injection, USP
20 mg/mL

For I.M. or I.V. Use
1 mL single dose vial
rX only

✓ 0.25

Step 1
What is the unit of measurement the nurse should calculate? (Place the unit of measure being calculated on the left side of the equation.)

$$X \text{ mL} =$$

Step 2
Find the ratio in the item that contains the same unit as the unit being calculated. (Place the ratio on the right side of the equation, ensuring that the unit in the numerator matches the unit being calculated.)

$$X \text{ mL} = \frac{1 \text{ mL}}{}$$