Tutorial: Dosage Calculation and Safe Medication Administration 3.0
Module: Critical Care Medications

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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.)

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

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.

$$X \text{ kg} = \frac{1 \text{ kg}}{} \times \frac{141 \text{ } \cancel{\text{lb}}}{}$$

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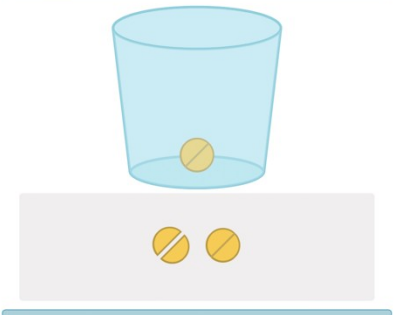
(Review the MAR. Move the number of tablets the nurse should administer into the medication cup. Then click "Submit.")



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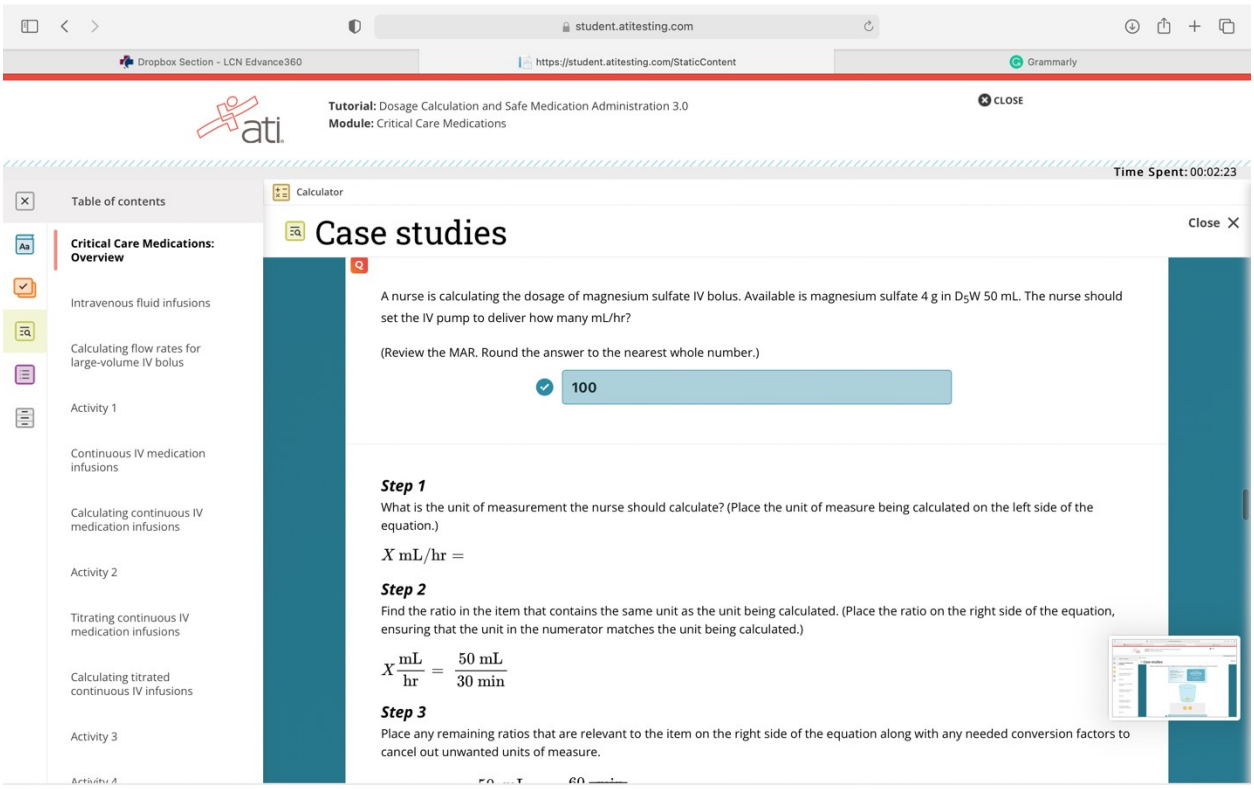
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A nurse is calculating the dosage of magnesium sulfate IV bolus. Available is magnesium sulfate 4 g in D5W 50 mL. The nurse should set the IV pump to deliver how many mL/hr?
(Review the MAR. Round the answer to the nearest whole number.)
100
Step 1
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 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 mL/hr = 50 mL/30 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.

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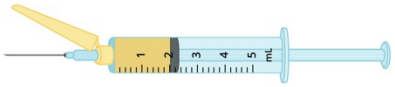
dragging the syringe. Then click "Submit.")



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.)

$X\ \text{mL} =$

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.)

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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 factor to cancel out unwanted units of measure.

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

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A nurse is calculating the dosage of magnesium sulfate IV by continuous infusion. Available is magnesium sulfate 20 g in D_5W 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.

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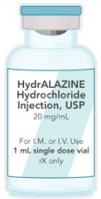
A nurse is calculating the dosage of hydralazine. How many milliliters should the nurse administer?

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



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