



Calculator | Time Spent: 00:12:18

### Case studies

A nurse is calculating the dosage of magnesium sulfate IV bolus. Available is magnesium sulfate 4 g in D<sub>5</sub>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.)

**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.  
 $X \text{ mL/hr} = \frac{50 \text{ mL}}{30 \text{ min}} \times \frac{60 \text{ min}}{1 \text{ hr}}$

**Step 4**  
Solve for X

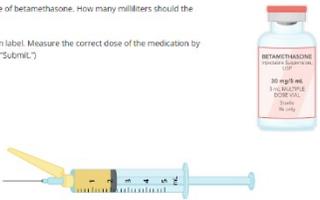
Question 3

Calculator | Time Spent: 00:12:53

### Case studies

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.")



**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**

Question 4

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### Case studies

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.)

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

**Step 4**  
Solve for X

Question 5

Calculator Time Spent: 00:13:53

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### Case studies

A nurse is calculating the dosage of magnesium sulfate IV by continuous infusion. Available is magnesium sulfate 20 g in D<sub>5</sub>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.)

**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.  
 $X \text{ mL/hr} = \frac{500 \text{ mL}}{20 \text{ g}} \times \frac{2 \text{ g}}{1}$

**Step 4**  
Solve for X

Question 6

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Module: Safe Dosage

Calculator Time Spent: 00:14:23

### Case studies

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 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 units in the numerator matches the unit being calculated.)

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Question 7