

## Case studies



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

(Review the MAAT flow sheet, and medication label. Round the answer to the nearest hundredth.)

9.18

First, determine the client's weight in pounds.

### 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 lb =

### 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.)

$$X \text{ lb} = \frac{1 \text{ lb}}{16 \text{ oz}}$$



52°F

ENG

9:15 PM  
10/21/2021

2

# studies

A nurse is calculating the dosage of cimetidine. Available is cimetidine oral liquid 40 mg/mL. How many milliliters should the nurse administer?

(Review the MAR, flow sheet, and medication label. Round the answer to the nearest tenth.)

✓ 1.3

## 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 unit in the numerator matches the unit being calculated.)

$$X \text{ mL} = \frac{1 \text{ mL}}{40 \text{ mg}}$$

Windows taskbar showing icons for Start, Task View, Edge, File Explorer, Mail, Calendar, Photos, OneDrive, Teams, Word, PowerPoint, Outlook, and system tray with weather (52°F), language (ENG), and date/time (9:16 PM, 10/21/2021).



Tutorial: Dosage Calculation and Safe Medication Administration 3.0  
Module: Dosages by Weight

Time Spent: 00:16:11

## Case studies

A nurse is preparing to reconstitute amoxicillin. How much diluent should the nurse add to this medication?  
(Review the MAR, flow sheet, and medication label. Round to a whole number.)

Directions for mixing: Tap bottle until all powder floats freely. Add approximately 1/3 total amount of water recommended. Add remaining water, again shake vigorously.

Each 5 mL (1 teaspoonful) will contain amoxicillin trihydrate equivalent to 400 mg anhydrous amoxicillin.

Dosage: Administer every 12 hours. See accompanying prescribing information.

Keep tightly closed.

Shake well before using.

Safety: Irritant; inhalation not required.

Discard suspension after 14 days.

**Amoxicillin**  
for Oral Suspension, USP

400 mg/5 mL

50 mL when reconstituted  
Rx only

Net contents: Equivalent to 4 g anhydrous amoxicillin.

Store dry powder at 20° to 25°C (68 to 77°F). Excursions permitted to 15° to 30°C (59° to 86°F) (see USP Controlled Room Temperature).

Batch: \_\_\_\_\_  
Expiry: \_\_\_\_\_

35

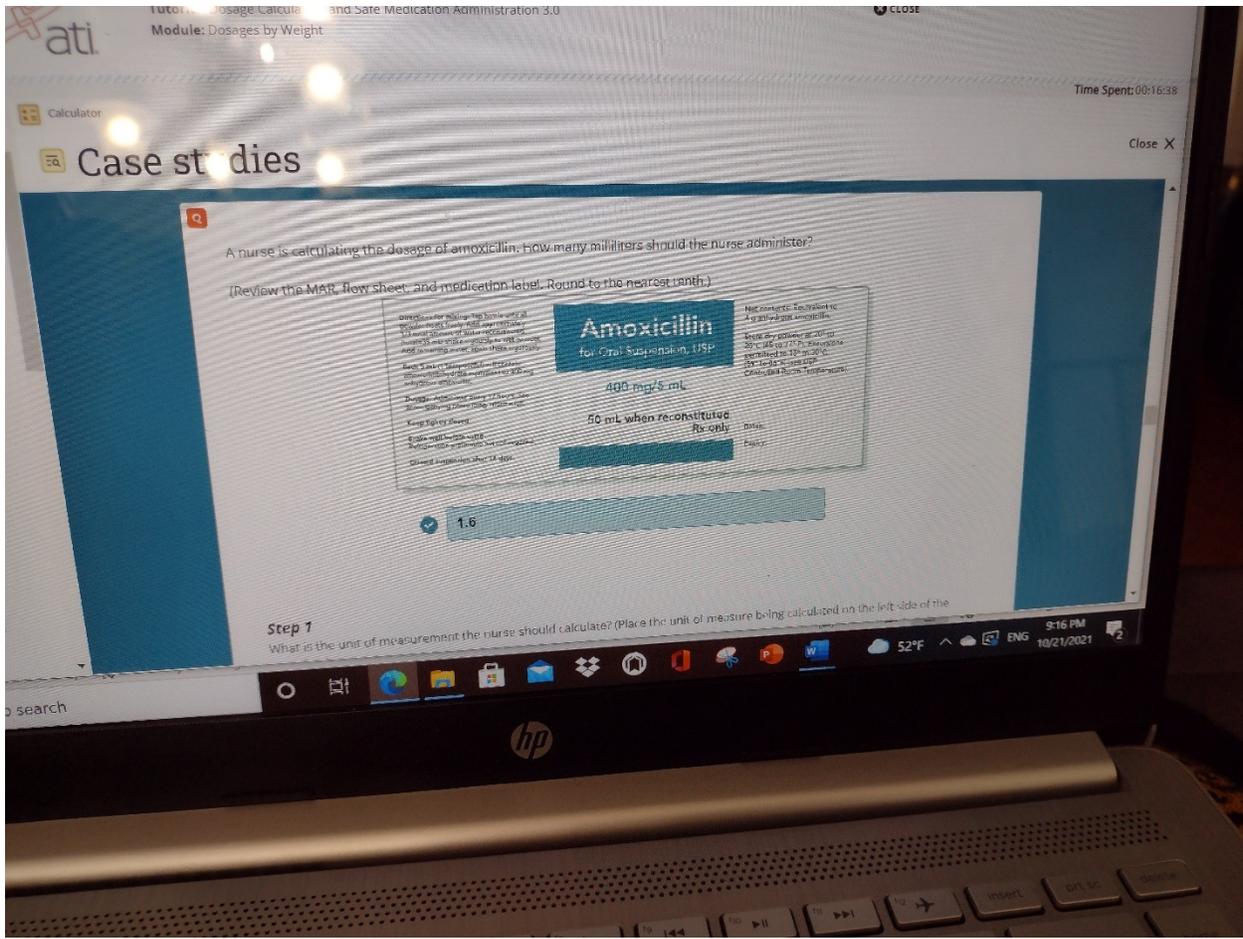
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**Amoxicillin**  
for Oral Suspension, USP

Net contents: Equivalent to 4 g anhydrous amoxicillin.

Store dry powder at 20° to 25°C (68 to 77°F). Excursions permitted to 15° to 30°C



A nurse is calculating a client's daily maintenance fluid requirement. What is the daily maintenance fluid requirement for the client?  
(Review the MAR, flow sheet, and medication label. Round the answer to the nearest whole number.)

918

**Step 1**

What is the formula?

$$X = (100 \times 10) + (50 \times 10) + (20 \times \dots)$$

**Step 2**

What is the client's weight? (Convert to kg if needed.)

9.18 kg

**Step 2**

Divide the infant's weight into three portions: the first 10 kg, the second 10 kg, and the remainder of the weight in kg.

First 10 kg ~ 9.18 kg

Taskbar area showing icons for various applications and system information. The system tray on the right displays the temperature as 52°F, the language as ENG, the time as 9:17 PM, and the date as 10/21/2021.





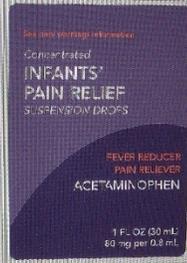
Calculator

Time Spent: 00:14:18

## Case studies

Close X

A nurse is calculating the dosage of acetaminophen. How many milliliters should the nurse administer?  
(Review the MAR, flow sheet, and medication label. Round the answer to the nearest tenth. Measure the correct dose of the medication by dragging the syringe. Then click "Submit".)



1.2

here to search

Taskbar area showing icons for various applications and system information: 52°F, ENG, 9:19 PM, 10/21/2021.



A nurse is calculating the fluid bolus prescribed for a client. The nurse should set the IV pump to deliver how many mL/hr?

(Review the MAR, flow sheet, and medication label. Round the answer to the nearest whole number.)

63

**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.)

$$X \text{ mL/hr} = \frac{250 \text{ mL}}{4 \text{ hr}}$$

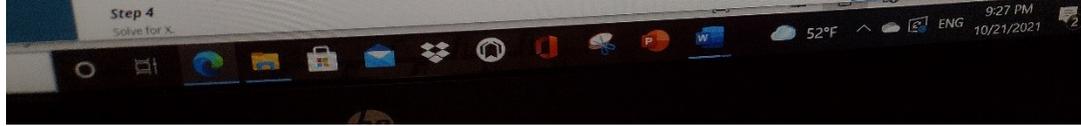
**Step 3**

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.

$$X \text{ mL/hr} = \frac{250 \text{ mL}}{4 \text{ hr}}$$

**Step 4**

Solve for X.



A nurse is preparing to administer amoxicillin. The recommended dose of amoxicillin is 25 to 50 mg/kg/day. How does the prescribed amount compare to the recommended dosage range?

(Review the MAR, flow sheet, and medication label. Round to the nearest whole number.)

- a. Above the recommended dosage range
- b. Below the recommended dosage range
- c. Within the recommended dosage range
- d. None of the above

**Step 1**

Look up the recommended dosage.

25 to 50 mg/kg/day

**Step 2**

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 mg =

**Step 3**

