

Math Worksheets for Enteral Feedings

How to Change Ounces (oz) to Milliliters (mL)

If the feeding is ordered in ounces

- **FIRST** change ounces to milliliters (see below).
- **THEN** determine rate, if needed (see page three).

To change ounces to milliliters

- 1 oz = 30 mL
- Multiply number of oz ordered by 30

$$\text{_____ oz} \times 30 = \text{_____ mL of liquid food}$$

Example One

Dose = 4 oz of formula

$$4 \text{ oz} \times 30 = 120 \text{ mL of formula}$$

Example Two

Dose = 12.5 oz of breast milk

$$12.5 \text{ oz} \times 30 = 375 \text{ mL of breast milk}$$

How to Change Minutes (min) to Hours (hrs)

If the length of the feeding (time) is ordered in minutes

- **FIRST** change minutes to hours (see below).
- **THEN** determine rate (see page three) or dose (see page four).

To change min to hrs

- 1 hr = 60 min
- Divide time (min) by 60

$$\frac{\text{Time (min)}}{\quad} \div 60 = \frac{\text{Time (hrs)}}{\quad}$$

Example One

Time = 45 min

$$45 \text{ min} \div 60 = 0.75 \text{ hrs}$$

Example Two

Time = 90 min

$$90 \text{ min} \div 60 = 1.5 \text{ hrs}$$

How to Determine Rate

Definitions

- **Rate** is the amount of liquid food you give in one hour. Rate is measured in mL/hr (milliliters per hour).
- **Dose** is the total amount of liquid food you want to give in one feeding. Dose is measured in mL (milliliters).
- **Time** is the length of the feeding. Time is measured in hrs (hours).

If the feeding order is written with dose and time, you must determine the rate. Divide dose in mL by time in hrs to determine the rate.

$$\frac{\text{Dose (mL)}}{\text{Time (hrs)}} = \text{Rate (mL/hr)}$$

Round up to nearest whole number

Example One

Dose = 400 mL liquid food
Time = 10 hrs

$$\frac{400 \text{ mL}}{10 \text{ hrs}} = 40 \text{ mL/hr}$$

Example Two

Dose = 100 mL of liquid food
Time = 0.75 hrs

$$\frac{100 \text{ mL}}{0.75 \text{ hrs}} = 134 \text{ mL/hr}$$

Rounded up to nearest whole number

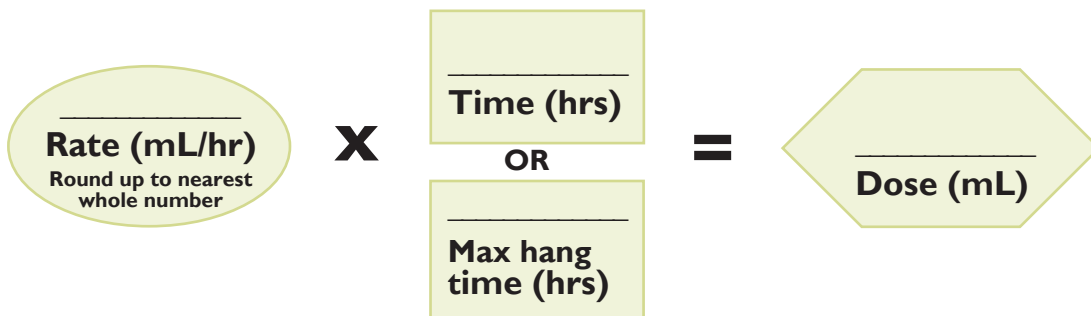
How to Determine Dose

Definitions

- **Rate** is the amount of liquid food you give in one hour. Rate is measured in mL/hr (milliliters per hour).
- **Dose** is the total amount of liquid food you want to give in one feeding. Dose is measured in mL (milliliters).
- **Time** is the length of the feeding. Time is measured in hrs (hours).

If the feeding order is written with rate and time, you must determine the dose. Multiply rate by time in hrs or the maximum hang time in hrs to determine the dose.

NOTE! If the ordered time is longer than the maximum hang time for your liquid food, use the maximum hang time in the equation below to determine the dose.

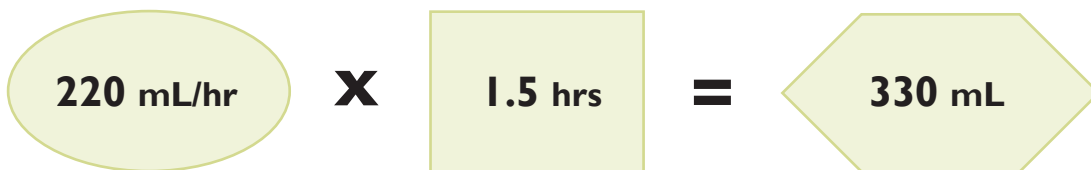


Example One

Rate = 220 mL/hr of formula mixed from powder

Time = 1.5 hrs

Maximum hang time for formula mixed from powder = 4 hrs

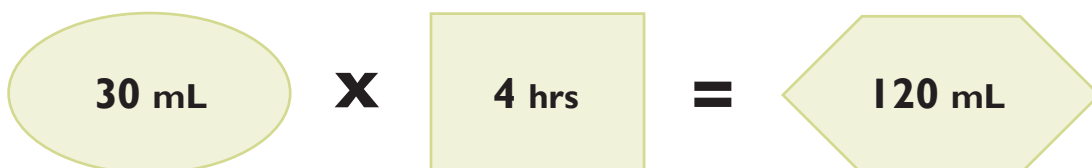


Example Two

Rate = 30 mL/hr of breast milk

Time = 12 hrs

Maximum hang time for breast milk = 4 hrs



NOTE! Since the maximum hang time for breast milk is four hours, you must refill the bag every four hours with 120 mL.

How to Determine Drops per Minute for Gravity Feeding Bags

Definitions

- **Rate** is the amount of liquid food you give in one hour. Rate is measured in mL/hr (milliliters per hour).
- **Drops per milliliter** (drops/mL) is the number of drops it takes to deliver one milliliter of liquid food using gravity feeding bag tubing. Gravity feeding bags have the number of drops/mL for that tubing noted on the package. Each brand of tubing has a specific number. **ALWAYS** check the package to confirm the number of drops/mL for the tubing you are using.
- **Drops per minute** (drops/min) is the number of drops you count per minute in the drip chamber of gravity feeding bag tubing. This allows you to make sure you give the right amount of liquid food over the correct amount of time.

First, you must know the rate. Determine the rate using the steps on page three of this guide. Multiply the rate by the number of drops per mL from the gravity feeding bag package. Divide this number by 60 to determine the number of drops per minute.

$$\text{Rate (mL/hr)} \times \text{Drops/mL From gravity feeding bag package} \div 60 \text{ min} = \text{Drops/min Round up to nearest whole number}$$

Example One

Rate = 50 mL/hr of formula

Gravity feeding bag tubing package states 8 drops/mL

$$50 \text{ mL/hr} \times 8 \text{ Drops/mL} \div 60 \text{ min} = 7 \text{ Drops/min Rounded up to nearest whole number}$$

Example Two

Rate = 30 mL/hr of breast milk

Gravity feeding bag tubing package states 14 drops/mL

$$40 \text{ mL/hr} \times 14 \text{ Drops/mL} \div 60 \text{ min} = 9 \text{ Drops/min Rounded up to nearest whole number}$$