Calculating Drop Factor with Gravity IV Infusions

- Identify the drop factor of your IV administration set (tubing) found on the label of the tubing package. **Macrodrip sets are either 10, 15 or 20 drops to deliver 1 mL of fluid in a minute.** Microdrip sets are commonly 60.

- Formula to calculate gravity flow rates:
  - mL/hr divided by 60 minutes (1 hour) x drop factor = drops/minute (rounded off)

Examples using Macrodrip drop factors:

A. IV fluid of 125mL/hr using tubing with drop factor of 10.
   - 125mL/hr divided by 60 minutes = 2.08mL/min
   - 2.08mL/min X 10 drop factor = **21 drops/min**

B. IV fluid of 125mL/hr using tubing with drop factor of 15.
   - 125mL/hr divided by 60 minutes (1 hour) =
     - 2.08mL/min
   - 2.08mL/min X 15 drop factor = **31 drops/min**

C. IV fluid of 125mL/hr using tubing with drop factor of 20.
   - 125mL/hr divided by 60 minutes = 2.08mL/min
   - 2.08mL/min X 20 drop factor = **42 drops/min**

- Confirm/monitor the gravity infusion rate for accuracy; Flow control devices (dial a flow) do NOT replace this responsibility.

- Count the drops/minute for a full minute when infusing by gravity and setting the clamp/confirming the drip rate.

<table>
<thead>
<tr>
<th>Common drops/minute for infusions using 10 drop factor tubing</th>
<th>150mL/hr = 25 drops/min</th>
<th>75mL/hr = 13 (12.5) drops/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>125mL/hr = 21 (20.8) drops/min</td>
<td></td>
<td>50mL/hr = 8 (8.3) drops/min</td>
</tr>
<tr>
<td>100mL/hr = 17 (16.6) drops/min</td>
<td></td>
<td>25mL/hr = 4 (4.1) drops/min</td>
</tr>
</tbody>
</table>

Count for 1 full minute:

One drip!!! HAHAHA…
Two drips!!! HAHAHA…
Three drips!!! HAHAHA!!…