Example 1

Dextrose 5% in water with Amicar is infusing at a rate of 55 ml per hour. The IV solution was prepared by adding 5000 mg of Amicar to dextrose 5% in water. The final solution contains a total volume of 250 ml. How many mg are infusing per hour? How many mg are infusing per minute?

To find the mg/hr:

1. Write down infusion rate
2. Write down IV concentration
3. Reduce the units
4. Perform the math
Example 2

Calculating IV Drug Dose per Hour & Minute

- **Example 2**  
  Your patient is receiving an IV of 250 milliliters of 0.9% NS with 500 milligrams of the Inocor. The flow rate is 15 milliliters per hour. How many milligrams per hour is your patient receiving? How many milligrams per minute?

To find the mg/hr:
- Step 1 – Write down infusion rate
- Step 2 – Write down IV concentration
- Step 3 – Reduce the units
- Step 4 – Perform the math
Solution to Example One - Part One

Calculating IV Drug Dose per Hour & Minute

- Example 1: Dextrose 5% in water with Amicar is infusing at a rate of 55 ml per hour. The IV solution was prepared by adding 5000 mg of Amicar to dextrose 5% in water. The final solution contains a total volume of 250 ml. How many mg are infusing per hour? How many mg are infusing per minute?

To find the mg/hr:

1. Write down infusion rate
2. Write down IV concentration
3. Reduce the units
4. Perform the math

\[
\frac{55 \text{ ml}}{1 \text{ hr}} \times \frac{5000 \text{ mg}}{250 \text{ ml}} = \frac{275,000 \text{ mg}}{250 \text{ hr}} = \frac{1,100 \text{ mg}}{1 \text{ hr}}
\]

To find the mg/minute:

Convert the mg/hr

\[
\frac{1,100 \text{ mg}}{1 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} = \frac{18.33 \text{ mg}}{60 \text{ min}}
\]

Round your answer to the nearest whole number. We are infusing 18 mg/min.

Solution to Example One - Part Two

Calculating IV Drug Dose per Hour & Minute

- Example 1: Dextrose 5% in water with Amicar is infusing at a rate of 55 ml per hour. The IV solution was prepared by adding 5000 mg of Amicar to dextrose 5% in water. The final solution contained a total volume of 250 ml. How many mg are infusing per hour? How many mg are infusing per minute?

To find the ml/hr:

1. Write down infusion rate
2. Write down IV concentration
3. Reduce the units
4. Perform the math

\[
\frac{55 \text{ ml}}{1 \text{ hr}} \times \frac{1 \text{ hr}}{1 \text{ min}} \times \frac{1 \text{ x 250}}{250 \text{ ml}} = \frac{1,100 \text{ mg}}{1 \text{ hr}}
\]

To find the mg/minute:

Convert the mg/hr

\[
\frac{1,100 \text{ mg}}{1 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} = \frac{18.33 \text{ mg}}{60 \text{ min}}
\]

Round your answer to the nearest whole number. We are infusing 18 mg/min.
Example 2

Your patient is receiving an IV of 250 milliliters of 0.9% NS with 500 milligrams of the Inocor. The flow rate is 15 milliliters per hour. How many milligrams per hour is your patient receiving? How many milligrams per minute?

To find the mg/hr:

Step 1: Write down infusion rate
Step 2: Write down IV concentration
Step 3: Reduce the units
Step 4: Perform the math

\[
\begin{align*}
15 \text{ ml} & \quad 500 \text{ mg} \\
1 \text{ hr} & \quad 250 \text{ ml}
\end{align*}
\]

\[
\frac{15 \times 500 \text{ mg}}{1 \times 250 \text{ ml}} = \frac{7500 \text{ mg}}{250 \text{ hr}} = 30 \text{ mg/hr}
\]

To find the mg/minute:

Convert the mg/hr

\[
30 \text{ mg} \times \frac{1 \text{ hr}}{60 \text{ min}} = \frac{30 \times 1 \text{ mg}}{1 \times 60 \text{ min}} = \frac{30}{60} \text{ mg/min} = 0.5 \text{ mg/min}
\]