Math Study Strategies

Math for Nursing
Infusion Completion Time

An **IV** of 950 mL NS is started at 2:10am at at a rate of 25 gtt/min using a 15 gtt/mL set.

Calculate:
a) the infusion time
b) completion time

a) If 25 gtt/min is the rate of infusion we start with the ratio $\frac{1\,min}{25\,gtt}$ to find out how many drops in a minute will be infused

We write then the ratio representing the set calibration $\frac{15\,gtt}{mL}$

Using dimensional analysis (da) we write:

$$\frac{1\,min}{25\,\cancel{gtt}} \times \frac{15\,\cancel{gtt}}{\cancel{mL}} \times \frac{950\,\cancel{mL}}{patient} = \frac{14{,}250}{25} = 570\,min$$

570 ÷ 60 = 9.5 hr because in an hour are 60 minutes

To change 0.5 hr in minutes, multiply 0.5 by 60 = 30 minutes

Therefore the infusion time will be **9 hours and 30 minutes**

b) To find out the completion time:

Add the infusion times to the starting time of the infusion

$$\begin{array}{r} 2{:}10 \\ +\ 9.30 \\ \hline 11.40 \end{array}$$

Therefore the completion time will be at:

11:40pm