IV Therapy Passport
Drug Calculations in IV Therapy - Key Formulae

**Desired Dose Formula**
\[ \text{Desired Dose Formula} = \frac{\text{Want (W)}}{\text{Got (G)}} \times \text{Solution (S)} \]

**Dilution Requirements**
\[ \text{Volume to administer} = \frac{\text{Prescribed dose}}{\text{Max concentrations}} \]

**Drip Rates**
\[ \text{Volume of fluid prescribed} \times \text{Drops per mL (Drop factor)} \]
\[ \frac{\text{Time (No. of hours prescribed)} \times 60 \text{ (No. of minutes in an hour)}}{\text{Time to be infused in minutes}} \]

**Infusion over a fixed time**
\[ \frac{\text{Volume to be infused} \times 60 \text{ minutes}}{\text{Time to be infused in minutes}} \]
Maximum infusion rate = \[
\frac{\text{Dose prescribed (in mg)}}{\text{Maximum infusion rate (in mg/min)}}
\]

Weight based Prescriptions – infusion rate calculation =

\[
\text{Rate of infusion (mL/hr)} = \frac{\text{Dose (mcg/kg/min)} \times \text{weight (kg)} \times 60 \text{ (minutes)}}{\text{Drug in solution (mcg)}} \times \text{solution (volume in mL)}
\]

Weight based prescriptions – dose calculations =

\[
\text{Dose in mcg/kg/min} = \frac{\text{Concentration of drug in solution (mcg/mL)} \times \text{infusion rate (mL/hr)}}{\text{Patient's weight (kg)} \times 60 \text{ (minutes)}}
\]