Med Math Formulas Taught in Class

Single Dose Calculation:

$\frac{DD \; x \; V}{DH}$ = x mL

Example- You are ordered to give 0.01mg/kg of EPI. Your EPI is packaged 1mg/10ml. The patient weighs 20kg.

0.01mg x 20kg = 0.2mg

$\frac{0.2mg \; x \; 10ml}{1mg}$ = 2ml

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Infusion "Fluid Challenge" Calculation:

$\frac{TV \; x \; gtts}{Time}$ = x gtts/min

Example- You are ordered to give 200ml of normal saline over the next 30 minutes.

$\frac{200mL \; x \; 10gtts}{30 \; min}$ = 67 gtts/min

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Drip Calculation Not Weight Based:

$\frac{DD \; x \; V \; x \; gtts}{DH}$ = x gtts/min

Example- You are ordered to give 2mg/min. of Lidocaine. You are using 60 drop tubing and your Lidocaine is packaged 2g/500ml.

$\frac{2mg \; x \; 500ml \; x \; 60gtts}{2000mg}$ = 30 gtts/min

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Drip Calculation Weight Based:

$\frac{DD \; x \; V \; x \; gtts \; x \; kg}{DH}$ = x gtts/min

Example- You are ordered to give 5mcg/kg/min. of Dopamine. You are using 60 drop tubing and your Dopamine is packaged 400mg/250ml. Your patient weighs 100kg.

$\frac{5mcg \; x \; 250ml \; x \; 60gtts \; x \; 100kg}{400000mcg}$ = 18.75 gtts/min