

① $\frac{30\text{mg}}{500\text{mL}} = 0.6\text{mg/mL}$
 $0.6\text{mg} \times 1000 = 60\text{mcg/mL}$

② Order: 100mcg/min
 Sol: 30mg in 500mL

$\frac{30\text{mg}}{500\text{mL}} = 0.6\text{mg/mL}$
 $0.6 \times 1000 = 60\text{mcg/mL}$
 1mcg/min.

$\frac{100\text{mcg/min}}{1} \times 1 = 100\text{mL/hr.}$

③ $\frac{4\text{mg}}{500\text{mL}} = 0.008\text{mg/mL}$
 $0.008 \times 1000 = 8\text{mcg/mL}$

④ Order: 0.5mcg/min
 Sol: 4mg in 500mL

$\frac{4\text{mg}}{500\text{mL}} = 0.008\text{mg/mL}$
 $0.008\text{mL} \times 1000 = 8\text{mcg/mL}$

$\frac{8}{60} = 0.133\text{mcg/min}$

$\frac{0.5\text{mcg}}{0.133\text{mcg}} \times 1 = 3.76\text{mL} = 4\text{mL}$

⑤ 12U/kg/hr
 $12\text{U.} \times 90\text{kg} = 1080\text{units/hr.}$

⑥ $\frac{1080\text{U/hr}}{25,000\text{U}} \times 500\text{mL} = 21.6\text{mL/hr} = 22\text{mL/hr}$
 next PTT in 6 hrs.

⑦ $\frac{100\text{mL}}{1\text{mL}} \times 10\text{mg} = 1000\text{mg}$

⑧ Order: 5mcg/kg/min
 $5\text{mcg} \times 90\text{kg} = 450\text{mcg/min}$

$\frac{1000\text{mg}}{100\text{mL}} = 10\text{mg in 1 mL}$

$10\text{mg} \times 1000 = 10,000\text{mg in 1mL}$

$\frac{10,000\text{mcg}}{60\text{min}} = 166.67\text{mcg/min}$

$\frac{450\text{mcg/min}}{166.67\text{mcg/min}} \times 1\text{mL} = 2.69 = 3\text{mL/hr}$

Order: 50mcg/kg/min

$50\text{mcg} \times 90\text{kg} = 4500\text{mcg/min.}$

$\frac{4500\text{mcg/min}}{166.67\text{mcg/min}} \times 1\text{mL} = 26.99 = 27\text{mL/hr}$

Critical thinking

- ① pt. renal failure + results after the pt. goes to dialysis.
- ② in cases of inadequate mean arterial pressure instead of escalating the doses of nonrepinephrine.
- ③ because the pt. is intubated, it will help sedate and allow the pt. to be as comfortable as possible because of her serious medical issues.
- ④ a calcium channel blocker would help but the pt. is allergic to these.
- ⑤ the two vasopressors working together.
- ⑥ to help prevent side effects of the drug because of it being administered at a slower rate.