

## Measurements: Registered Nurse

### St. Alphonsus Hospital

**Job Description:** Recovery Room nurse monitors and cares for post-operative patients. Dispenses medication, IV fluids, oxygen, etc.

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### Problem:

A 220 pound male patient needs an intravenous infusion of dopamine. Dosage range of 2 - 20 mg/kg/minute is titrated.

If you begin at a rate of 5 mg/kg/minute with a concentration of 3200mg/CC (mL), what is the rate of infusion at cc/hour for this patient?

1 kg = 2.2 lbs

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### Solution:

How much does this patient weight in kg?

$$220 \text{ lbs} \div 2.2 \text{ lbs} = x \div 1$$

$$2.2 x = 220$$

$$x = 100 \text{ kg}$$

How much does this patient get in an hour?

$$5 \text{ mg} \times 100 \text{ kg} \times 60 \text{ minutes} = 30,000 \text{ mg} / \text{hour}$$

Concentration is 3,200 mg / cc

$$3200 \text{ mg} \div 30,000 \text{ mg} = 1 \text{ cc} \div x$$

$$3200 x = 30,000$$

$$x = 30,000 / 3200$$

$$x = 9.375 \text{ or } \sim 9 \text{ cc/hr}$$