Direction. All of the following calculations are to be done for controller or volumetric pump delivery.

1. Calculate the flow rate for a critical care drug that is to be delivered at 0.2 mg per min from a solution of 500 mL containing 100 mg.

2. A solution of 250 mL D5W contains 10 mg of a critical care medication. It is ordered to infuse at 4 mcg/min. What flow rate is necessary?

3. The medication is to be infused at the rate of 1 mcg/kg/min. The patient weighs 49 kg. The strength of the solution is 40 mg in 500 mL. Calculate the flow rate.

4. A solution of 3 mg of medication in 500 mL D5W is to be infused at the rate of 0.02 mcg/kg/min. The patient weighs 67 kg. Calculate the flow rate.

5. The dosage ordered is 5 mcg/kg/min. The patient weighs 85 kg and the solution strength is 600 mg in 250 mL. Calculate the flow rate.

6. An IV of 500 mL containing 600 mg of medication is ordered to infuse at the rate of 20 mL/hr. What dosage is infusing per hr? per min?

7. A solution infusing at 25 mL/hr has a strength of 500 mg in 250 mL. What dosage is infusing per hr? per min?

8. A medication is being titrated to maintain systolic blood pressure > 100. The solution strength is 6 mg in 1000 mL D5W. The range ordered is 2–4 mcg/min. Calculate the flow rate range.

9. A medication dosage of 400-800 mcg/min has been ordered to regulate blood pressure. The solution infusing has a concentration of 200 mg in 50 mL. Calculate the flow rate range.

10. After several adjustments upwards and downwards the pressure has regulated at a flow rate of 9 mL/hr. How many mcg is the patient now receiving per minute?