

MAT 104 Supplemental Worksheet 4. PARENTERAL MEDICATIONS IN POWDERED FORM

Directions: For each of the following, determine: a) the volume of diluent to administer (justify when appropriate); b) the volume to administer.

Reconstitute according to:

1. Specific instructions given on label.

Example: Order is for 350 mg Polycillin IM.

<p>Polycillin ® Ampicillin Sodium for Injection 1 gram Each gram equivalent to 900 mg ampicillin buffered with 100 mg sodium citrate. For IM, add 3.5 ml sterile water for injection. Each 2 ml of resulting solution contains 500 mg Polycillin.</p>

2. A variety of instructions on the label from which to choose.

Example: Order is for 250,000 U Penicillin IM.

1,000,000 units per vial	
Pericillin Potassium	
Preparation: Reconstitute according to desired concentration.	
Diluent (mL)	Concentration (U/mL)
9.6	100,000
4.6	200,000
1.6	500,000

3. Instructions printed on a package insert for a variety of different vial sizes and modes of administration.

Example: Order is for 1 g Claforan IM. The insert below came with your 1 g vial.

Preparation: Claforan for IM or IV administration should be reconstituted as follows:		
Strength	Amount of Diluent (mL)	Concentration (mg/mL)
IM		
500 mg vial	2	230
1 g vial	3	300
2 g vial	5	330
IV		
500 mg vial	10	50
1 g vial	10	95
2 g vial	10	180

4. Order is for 250 mg Tazidime IM tid.

Tazidime ©	500 mg	For IM or IV Use
		For Add 1.5 mL of an IM: approved diluent. Yields 1.8 mL solution. (280 mg per mL)

5. Order is for 750 mg Geopen IM stat.

Geopen ©	2 g of carbenicillin	For IM or IV Use
Amount of Diluent to add to the 2 g Vial:		Volume to Be Withdrawn for a 1 g dose:
4.0 mL		2.5 mL
5.0 mL		3.0 mL
7.2 mL		4.0 mL

Answers:

1. Add 3.5 mL diluent. Administer 1.4 mL
2. Add 4.6 mL diluent (adding 4.6 mL results in computation that requires rounding, reducing accuracy, adding 1.6 mL results in concentrated solution which is difficult for muscle to absorb). Administer 2.5 mL
3. Add 3 mL diluent. Administer 3.3 mL (Question order which is more than 3 mL IM)
4. Add 1.5 mL diluent. Administer 0.89 mL.
5. Add 7.2 mL diluent (adding 4 mL or 5 mL results in computation that requires rounding, reducing accuracy). Administer 3 mL