

Reconstitution Calculation Worksheet

Round to the nearest tenth

- 1) Order: Solu-Medrol 200 mg IV q6h
Supply: 500 mg vial of powdered Solu-Medrol for IM or IV injection with directions on the left side of the label that state "*Reconstitute with 8 mL Bacteriostatic Water for Injection with Benzyl Alcohol. When reconstituted as directed each 8 mL contains: Methylprednisolone sodium succinate equivalent to 500 mg methylprednisolone (62.5 mg per mL)*"
- 2) Order: Zithromax 400 mg IV q.d. × 2 days
Supply: 500 mg vial of powdered Zithromax with directions on the left side of the label as follows "*Constitute to 100 mg/mL with 4.8 mL of Sterile Water for injections.*"
- 3) A patient is to receive 3.1 g ticarcillin (Ticar) IVPB. The vial label states: "*Add 18.5 mL of diluent for 0.155 g/mL solution.*" How many milliliters should the nurse administer?
- 4) A patient needs to receive 75 mg of Solu-Medrol I.V. When reconstituted, the two-chambered vial contains 125 mg/2mL. How many milliliters should the nurse administer?
- 5) A patient is to receive 500 mg cefazolin (Kefzol) IVPB. The vial label states: "*1 g Kefzol 3 mL diluent for a final solution of 250 mg/mL.*" How many milliliters should the nurse administer?
- 6) A doctor prescribes methicillin in 2 g IVPB and 1000 mg vials are available. The 1000 mg vial requires 5 mL of diluent and resulting concentration is $\frac{1g}{5mL}$. How many milliliters should the nurse administer?
- 7) A doctor prescribes Claforan 1 g I.M. q8h. Following the package insert's reconstitution instructions, the nurse adds 3 ml of appropriate diluent. The dosage strength of the reconstituted solution is 300 mg/ml. How many milliliters of the Claforan should the nurse administer with each dose?



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Answers/Solutions

- 1) Order: Solu-Medrol 200 mg IV q6h

Supply: 6.25 mg / mL

$$\frac{D}{H} \times Q = \frac{200 \text{ mg}}{62.5 \text{ mg}} \times 1 \text{ mL} = 3.2 \text{ mL}$$

- 2) Order: Zinthromax 400 mg IV q.d. × 2 days

Supply: 100 g / mL

$$\frac{D}{H} \times Q = \frac{400 \text{ mg}}{100 \text{ mg}} \times 1 \text{ mL} = 4 \text{ mL}$$

- 3) Order: 3.1 g ticarcillin IVBP

Supply: 0.155 g / mL

$$\frac{D}{H} \times Q = \frac{3.1 \text{ g}}{0.55 \text{ g}} \times 1 \text{ mL} = 20 \text{ mL}$$

- 4) Order: 75 mg Solu-Medrol I.V.

Supply: 125 mg / 2 mL

$$\frac{D}{H} \times Q = \frac{75 \text{ mg}}{125 \text{ mg}} \times 2 \text{ mL} = 1.2 \text{ mL}$$

- 5) Order: 500 mg cefazolin IVPB

Supply: 250 mg / mL

$$\frac{D}{H} \times Q = \frac{500 \text{ mg}}{250 \text{ mg}} \times 1 \text{ mL} = 2 \text{ mL}$$

- 6) Order: 2 g methicillin IVPB

Supply: 1000 mg vial requires 5 mL of diluent

2 g = 2000 mg

$$\frac{D}{H} \times Q = \frac{2000 \text{ mg}}{1000 \text{ mg}} \times 5 \text{ mL} = 10 \text{ mL}$$

- 7) Order: 1 g I.M. q8h

Supply: 300 mg / ml

1 g = 1000 mg

$$\frac{D}{H} \times Q = \frac{1000 \text{ mg}}{300 \text{ mg}} \times 1 \text{ mL} = 3.3 \text{ mL}$$

