Pediatric Drug Calculations

1. **Yes, The Dilution Is Appropriate.**

   <u>350 mg</u> = 14 mg/mL (350mg/25mL NS)

   The recommended range concentration is 10 mg/mL - 40 mg/mL.

2. **1.8 mg/mL**

   18 mg divided by 10 ml = 1.8 mg/mL

3. **B. 1,200 mg every 4 hours**

   200 mg*30kg=6,000 mg in 24 hours
   300 mg*30kg=9,000 mg in 24 hours
   A child weighing 30 kg can safely receive 6,000-9,000mg of piperacillin sodium in 24 hours.
   1,200 x 6 (4 doses in 24 hours) = 7,200 mg in 24 hours

4. **Yes**
   Calculated recommended range for 20 kg= 1,000mg – 1,500mg
   50 mg/kg*20 kg=1,000 mg
   75 mg/kg*20 kg=1,500 mg

5. **Yes, The medication is within the recommended range.**

   50 mg/24 hr*20 kg = 1,000 mg/24 hours
   75 mg/24 hr*20 kg = 1,500 mg/24 hours

   1000 mg/24 hr divided by 2 doses = 500 mg/12 hours
   1500 mg/24 hr divided by 2 doses = 750 mg/12 hours
   700 mg falls within the range of 500-750 mg.

6. **B. 400 mg every 8 hours**
   30 kg*40 mg = 1,200 mg in 24 hours
   200 mg*4=800 mg, so not A.

400 mg*3=1,200 mg, that is correct.
100 mg*2=200 mg, so not C.
1,200 mg every 24 hours is not right because needs
to be in divided doses.

7. **50 mL/hr**
   25 mL*60 gtt/mL(pump) = 1,500/30min = 50 mL/hr