

Madison Gage
Pediatric Dosage Calculation

1. Yes, 14 mg/mL is within the recommended range of 10 mg to 40 mg per mL.
- $350 \text{ mg} / 25 \text{ mL} = 14 \text{ mg/mL}$
2. 1.8 mg/mL is the concentration
- $18 \text{ mg} / 10 \text{ mL} = 1.8 \text{ mg/mL}$
3. B. 1,200 mg every 4 hrs
- $200 \text{ mg} \times 30 \text{ kg} = 6,000 \text{ mg/kg/day}$
- $300 \text{ mg} \times 30 \text{ kg} = 9,000 \text{ mg/kg/day}$
- $1,200 \text{ mg} \times 6 \text{ doses/Q4} = 7,200 \text{ mg}$
4. Yes, 1,000 mg daily is within the recommended range 50-70mg/kg/day.
- $50 \text{ mg} \times 20 \text{ kg} = 1,000 \text{ mg/24hrs}$
- $75 \text{ mg} \times 20 \text{ kg} = 1,500 \text{ mg/24hrs}$
5. Yes, 700 mg BID is within the recommended range of 50-75mg/kg/day.
- $50 \text{ mg} \times 20 \text{ kg} = 1,000 \text{ mg/24hrs}$
- $75 \text{ mg} \times 20 \text{ kg} = 1,500 \text{ mg/24hrs}$
6. B. 400 mg every 8 hours.
- $40 \text{ mg} \times 30 \text{ kg} = 1,200 \text{ mg/24hrs}$
- $400 \text{ mg} \times 3 \text{ doses/Q8} = 1,200 \text{ mg}$
7. 50 mL/hr
- $(25 \text{ mL} \times 60 \text{ gtts}) / 30 = 50 \text{ mL/hr}$
8. The recommended range is 260 mg to 292.5 mg in 12 hours.
The nurse will administer 5.5 mL of amoxicillin every 12 hours.
- $80 \text{ mg} \times 6.5 \text{ kg} = 520 \text{ mg}$, divide by 2 = 260 mg every 12 hrs
- $90 \text{ mg} \times 6.5 \text{ kg} = 585 \text{ mg}$, divide by 2 = 292.5 mg every 12 hrs
- $(275 \text{ mg}/x) = (250/5)$, $x = 5.5 \text{ mL}$
9. C. Contact the primary care provider regarding a dose exceeding the recommended range
- $50 \text{ mg} \times 15 \text{ kg} = 750 \text{ mg/day}$
- $75 \text{ mg} \times 15 \text{ kg} = 1,125 \text{ mg/day}$
-1.1 g every 12 hrs is 2.2 grams and exceeds the dose range.
10. A. administer the medication at 50 mL/hr
- $(25 \text{ mL} \times 60 \text{ gtt}) / 30 = 50 \text{ mL/hr}$

11. C. 100 mL/hr

$$-(50 \text{ mL} \times 60 \text{ gtt}) / 30 = 100 \text{ mL/hr}$$