

Pediatric Dosage Calculation Practice:

① $\frac{350\text{mg}}{25\text{ mL}} = 14\text{mg/mL}$, **YES**

Recommended Range: 10-40 mg/mL

② $\frac{18\text{mg}}{10\text{ mL}} = 1.8\text{mg/mL}$ concentration

③ Recommended Range: 200-300mg/kg/24 hrs

$200\text{mg} \times 30\text{kg} = 6,000\text{mg/day} = \text{min.}$
 $300\text{mg} \times 30\text{kg} = 9,000\text{mg/day} = \text{max.}$ } Range

A: $2,000\text{mg} \times 6 \text{ doses} = 12,000\text{mg/day}$ X

B: $1,200\text{mg} \times 6 \text{ doses} = 7,200\text{mg/day}$ ✓ → **B**

C: $1,450\text{mg} \times 4 \text{ doses} = 5,800\text{mg/day}$ X

D: $6,000\text{mg} \times 4 \text{ doses} = 24,000\text{mg/day}$ X

④ $50\text{mg} \times 20\text{kg} = 1,000\text{mg/day}$
 $75\text{mg} \times 20\text{kg} = 1,500\text{mg/day}$ } Range

YES 1,000 mg/day is in range

⑤ $50\text{mg} \times 20\text{kg} = 1,000\text{mg/day}$
 $75\text{mg} \times 20\text{kg} = 1,500\text{mg/day}$ } Range

$700\text{mg} \times 2 = 1,400\text{mg/day}$

YES 1,400 mg/day is in range

⑥ $40\text{mg} \times 30\text{kg} = 1,200\text{mg/day}$ - Give every 6, 8, 12 hrs

A: $200\text{mg} \times 4 \text{ doses} = 800\text{mg/day}$ X

B: $400\text{mg} \times 3 \text{ doses} = 1,200\text{mg/day}$ ✓ → **B**

C: $100\text{mg} \times 2 \text{ doses} = 200\text{mg/day}$ X

D: $1,200\text{mg} \times 1 \text{ dose} = 1,200\text{mg/day}$ X

⑦ $\frac{25\text{ mL}}{30\text{ min}} \times 60 = 50\text{gtt/min}$ → **50 mL/hr**

Additional Practice Problems:

① The recommended range is 260 mg to 292.5 mg every 12 hours.

The nurse will administer 5.5 mL of amoxicillin every 12 hours.

$80\text{mg} \times 6.5\text{kg} = 520 \div 2 = 260\text{mg/12hr}$ $90\text{mg} \times 6.5\text{kg} = 585 \div 2 = 292.5\text{mg/12hr}$

$\frac{275\text{mg}}{\text{X mL}} \times \frac{25\text{mL}}{5\text{mL}} \rightarrow \frac{275(5)}{250} = \frac{2750}{250} \times \text{X} = 5.5\text{ mL}$

② $50\text{mg} \times 15\text{kg} = 750\text{mg/day}$
 $75\text{mg} \times 15\text{kg} = 1,125\text{mg/day}$ } Range **C** Exceeds range

$1.1\text{g} \times 2 = 2.2\text{g/day}$ - out of range

③ $40\text{mg} \times 16\text{kg} = 640\text{mg/8 hours}$ ✓ ; $640\text{mg}/25\text{mL} = 25.6\text{mg/mL}$ $\frac{25\text{ mL}}{15\text{ min}} \times 60 = 100\text{mL/hr}$ $\frac{25\text{ mL} \times 60}{30\text{min}} = 50\text{ mL/hr}$ **A**

④ $\frac{50\text{mL}}{20\text{min}} \times 60 = 150\text{mL/hr}$ (gtt/min) $\frac{50\text{ mL}}{30\text{ min}} \times 60 = 100\text{ mL/hr}$ (gtt/min) 100-150 mL/hr = appropriate → **C**

Answers

1. YES
2. 1.8 mg/mL
3. B
4. YES
5. YES
6. B
7. 50 mL/hr

Additional Practice:

1. 260-292.5 mg every 12 hrs. Administer 5.5 mL
2. C
3. A
4. C