

Pediatric Med Math Practice Quiz 3 Key
Show your calculations

1. Order: dexamethasone 1.5 mg PO BID

Supply: tablet 0.75 mg

Answer: 2 tablets

2. Order: digoxin 0.25 mg PO daily

Supply: scored tablets 0.5 mg

Answer: 1/2 tablet

3. Order: ampicillin 0.5 g PO q6 hours

Supply: capsules 250 mg

Answer: 2 capsules

4. Order: prednisone 10 mg PO TID

Supply: tablet 2.5 mg

Answer: 4 tablets

5. Order: nifedipine 20 mg PO BID

Supply: capsules 10 mg

Answer 2 tablets

6. Diphenhydramine 5 mg/kg/day to be given every 6 hours. Child weighs 44 lbs.
How many mg/dose?

- a. 44 lbs = 20 kg
- b. 5 mg(20 kg)= 100 mg/day
- c. $100/4 =$ **25 mg/dose**

7. Prednisone 2 mg/kg/day to be given every 12 hours. Child weighs 22 lbs. How many mg/dose?

- a. 22 lbs = 10 kg
- b. 2mg (10 kg)= 20 mg/day
- c. $20/2=$ **10 mg/dose**

8. Digoxin 0.010 mg/kg/day to be given every 12 hours. Child weighs 44 lbs. Available elixir is 0.05 mg/mL. How many mL/dose?

- a. 44 lbs= 20 kg
- b. $0.010\text{mg}(20 \text{ kg})= 0.2 \text{ mg/day}$
- c. $0.2/2= 0.1 \text{ mg/dose}$
- d. $0.01/0.05 \times 1 =$ **2 mL/dose**

9. Child weighs 18 kg. Calculate hourly rate of IVF, round to the nearest whole number.

- a. $1000 \text{ mL} + 50(8)$
- b. $1000 \text{ mL} + 400 = 1400$
- c. $1400/24 = 58.33$ **~58 mL/hr**

10. Child is 21 kg and 116 cm tall. Calculate their body surface area.

- a. $21 (116) = 2436$
- b. $2436/3600= 0.676$
- c. Square Root of 0.676= **0.82 m²**

11. Child is 42 lbs. and 36 inches tall. Calculate their body surface area. Round to the nearest hundredth.

- a. $42/2.2= 19.09090909 \text{ kg}$
- b. $36(2.54)= 91.44 \text{ cm}$

c. $\sqrt{19.09090909(91.44)}$

d. $\sqrt{\frac{1745.6727}{3600}}$

e. $\sqrt{0.484909}$

f. $\approx 0.696354 \text{ m}^2$

g. 0.70 m^2

12. Order: Amoxicillin 70 mg q8

Weight: 20 lbs

Supply: Amoxicillin 125 mg/5 mL

Literature: 20-40 mg/kg/day in divided doses every 8 hours

Determine if the order is safe and calculate the amount needed. Round to the nearest hundredth.

- a. $20\text{ lbs} = 9.09\text{ kg}$
- b. $20(9.09) = 181.8\text{ mg/day}$ (Low end)
- c. $40(9.09) = 363.6\text{ mg/day}$ (High end)
- d. **Range: 181.8—363.6 mg/day**
- e. $70\text{ mg (dose TID)} \times 3 = 210\text{ mg/day} \rightarrow$ Safe Dose, within range
- f. $70\text{ mg}/125\text{ mg} = 0.56$
- g. $0.56(5) = \mathbf{2.8\text{ mL/dose}}$

13. Order: Ferrous sulfate 200 mg PO TID

Weight: 30 kg

Supply: bottle of 125 mg/5 mL

Literature: 600 mg/day divided TID

Determine if the order is safe and calculate the amount needed. Round to the nearest hundredth.

- a. Dose is safe: 200 mg is within range of 600 mg/day
- b. $200\text{ mg}/125\text{ mg} = 1.6$
- c. $1.6(5) = \mathbf{8\text{ mL/dose}}$

14. Order: Metoclopramide 5 mg PO q6

Weight: 30 kg

Supply: syrup 5 mg/5 mL

Literature: 0.1 – 0.2 mg/kg/dose up to QID

- a. $0.1(30) = 3\text{ mg/dose}$ (Low end)
- b. $0.2(30) = 6\text{ mg/dose}$ (High end)
- c. **Range: 3 mg-6 mg/dose $\rightarrow$ Safe dose, 5 mg within range**
- d. $5\text{ mg}/5\text{ mL} = 1$
- e. $\mathbf{1(5) = 5\text{ mL/dose}}$

15. Order: Phenytoin 60 mg PO BID

Weight: 12 lbs 8 oz

Supply: suspension 30 mg/5 mL

Literature: 4-8 mg/kg/day divided into 2 doses. Maximum dose is 300 mg/day

a. 8 oz = 0.5 lb

b. 12.5 lbs = 5.68 kg

c. 5.68 (4 mg)= 22.72 (Low end)

d. 5.68 (8 mg)= 45.44 (High end)

e. **Range: 22.72 mg—45.44 mg/day**

f. **Range PER DOSE: 11.36—22.72 mg/dose**

g. **60 mg > 22.72 mg, dose is out of range, speak with the provider.**

16. Order: Digoxin 100 mcg PO BID

Weight: 32 lbs.

Supply: 0.05 mg/mL

How many mL does the nurse draw up?

a. 100 mcg= 0.1 mg

b. $0.1/0.05 = 2$

c. 2 (1 mL)= **2 mL**