

Pediatric Med Math Practice Quiz 2 Key

Show your calculations

1. A 5-year-old child weighing 20 kg has an order for acetaminophen liquid 300 mg PO PRN every 4 hours. On hand is acetaminophen liquid 160 mg/5ml.
- a. How many mL will the nurse draw up per dose? Round to the nearest tenth.

$$\frac{300 \text{ mg}}{160 \text{ mg}} * 5$$

$$1.875(5) = 9.375$$

$$9.4 \text{ mL}$$

2. A child weighs 30 kg. The safe daily drug dosage is 4mg/kg/day. Calculate the total daily dosage for this child.

$$4(30) = 120 \text{ mg/day}$$

3. Calculate the daily fluid volume for a 32 kg child.

Formula: >20 kg = 1500 mL + 20 mL/kg over 20 kg

$$1500 \text{ mL} + 20(32 - 20)$$

$$1500 \text{ mL} + 20(12)$$

$$1500 \text{ mL} + 240 = 1740 \text{ mL}$$

4. Calculate the daily fluid volume for a 16 kg child.

Formula: 11-20 kg = 1000 mL + 50 mL/kg for every kg over 10

$$1000 \text{ mL} + 50(16 - 10)$$

$$1000 \text{ mL} + 50(6)$$

$$1000 \text{ mL} + 300 = 1300 \text{ mL/day}$$

5. Calculate the BSA for a child who weighs 11.3 kg and is 75 cm.

a. $\sqrt{11.3(75)}$

b. $\sqrt{847.5}$

c. $\sqrt{\frac{847.5}{3600}}$

d. $\sqrt{0.2354166}$

e. $\approx 0.4851974 m^2$

f. $0.49 m^2$

6. Order: diphenhydramine 50 mg PO q 6 hours PRN
On Hand: diphenhydramine 25 mg/5 mL
Administer 10 mL

$$\frac{50}{25} * 5 mL$$

$$5(2) = 10 mL$$

7. Order: gabapentin 200 mg PO daily
On Hand: gabapentin 100 mg capsules
Administer 2 capsules

$$\frac{200}{100} = 2$$

8. Order: chlorpromazine 150 mg PO daily
On Hand: chlorpromazine 100 mg tablets
Administer 1.5 tablets

$$\frac{150}{100} = 1.5$$

9. Order: levothyroxine 0.3 mg PO daily
Available: levothyroxine 150 mcg tablets
Administer 2 tablets

$$150 \text{ mcg} = 0.15 \text{ mg}$$

$$\frac{0.3}{0.15} = 2$$

10. Order: furosemide 20 mg IM
Available: furosemide 20 mg/2 mL
Administer 2 mL

$$\frac{20}{20} * 2 = 2$$

11. Order: heparin 10,000 units subq daily
Available: heparin 5,000 units/mL
Administer 2 mL

$$\frac{10,000}{5,000} * 1 = 2$$

12. Order: amoxicillin 20 mg/kg/day in divided doses q 8 hours
Pt weight: 20 lbs
On Hand: amoxicillin 250 mg/5 mL
Round to the nearest hundredth
Administer 1.21 mL/dose

$$20 \text{ lbs} = 9.09090909 \text{ kg}$$

$$20 (9.09090909) = 181.81818 \frac{\text{mg}}{\text{day}}$$

$$\frac{181.81818}{3} = 60.6060606 \text{ mg}$$

$$\frac{60.6060606}{250} * 5 \text{ mL}$$

$$0.2424242 (5) = 1.212121$$

$$1.21 \text{ mL}$$

13. Convert the following:

175 mcg = 0.175 mg

3250 mL = 3.25 L

75 cc = 75 mL

125 lbs = 56.818181 kg

325 mcg = 0.325 mg

1 cup = 8 oz = 240 cc

150 lbs = 68.181818 kg