Pediatric Med Math Practice Quiz 2

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.

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

$$1.875(5) = 9.375$$

$$9.4\,mL$$

2. A child weighs 30 kg. The safe daily drug dosage is 4mg/kg/day. Calculate the total daily dosage for this child.
$4(30) = 120\,mg/day$

3. Calculate the daily fluid volume for a 32 kg child.
Formula: >20 kg= 1500 mL + 20 mL/kg over 20 kg
$1500\,mL + 20(32-20)$
$1500\,mL + 20(12)$
1500 $mL + 240 = 1740\,mL$

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
$1000\,mL + 50(16-10)$
$1000\,mL + 50(6)$
$1000\,mL + 300 = 1300\,mL/day$

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. ¿$0.4851974\,m2$

f. $0.49\,m2$

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: chloropromazine 150 mg PO daily
   On Hand: chloropromazine 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 mcg= 0.15 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

$$20\,lbs = 9.09090909\,kg$$

$$20\left(9.0909090909\right) = 181.181818\,\frac{mg}{day}$$

$$\frac{181.181818}{3} = 60.6060606\,mg$$

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

$$0.2424242\left(5\right) = 1.212121$$

$$1.21\,mL$$

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