Nursing Dosage Calculation Practice Problems

Hints for Converting

1) **<u>Memorize</u> equivalents / conversions.**

2) **Read carefully**.

3) **If the dose is based on weight, convert patient's weight to correct unit if necessary, then find dose based on patient's weight**.

4) **Set up proportion** – Desired dose over the available dose

$$\frac{\text{Desired Dose}}{\text{Available}} \quad \textbf{or} \quad \frac{D}{A}$$

   a) **Label all terms with correct units.**
   b) **Are you comparing like units?**
      If not, convert to like units.

5) **Estimate the answer.**

6) **Follow basic math principles to find value of unknown.**

7) **Label all answers with correct units.**
   (Are you reporting the unit requested?)

8) **Check all work, and think logically about the answer obtained.** ***Does it make sense?***

Sample Answers

1) $\frac{100{,}000\ units}{1{,}000{,}000\ units} = \frac{x\ cc}{20\ cc}$ $\frac{1}{10} = \frac{x}{20}$ $20 = 10\,x$ $x = 2$ cc	**<u>Desired Dose</u>** **Available Dose** 1) set up proportion 2) like units are being compared, therefore use basic math principles 3) reduce the left side 4) cross multiply 5) *cc* is the unknown unit and is also requested unit therefore **stop.**
2) $\frac{0.35\ mg}{0.7\ mg} = \frac{n\ tablets}{1\ tablet}$ n= 0.5 tablets or ½ tablets	**<u>Desired Dose</u>** **Available Dose** 1) set up proportion 2) like units are being compared, therefore use basic math principles 3) simplify the left side 4) *tablet* is the unknown unit and is also requested unit therefore **stop.**
6) $\frac{22\ lbs}{2.2\ lbs} = \frac{n\ kg}{1\ kg}$ $10\ kg = x$ $\frac{10\ kg}{1kg} = \frac{x\ gr}{\frac{1}{4}\ gr}$ $x = gr\ \frac{10}{4}$ or $gr\ 2\ ½$ $\frac{gr\ 2\frac{1}{2}}{25\ mg} = \frac{x\ cc}{5\ cc}$ $\frac{150\ mg}{25\ mg} = \frac{x\ cc}{5\ cc}$ $x = 30$ cc	1) Dose is based on *kg* therefore convert patient's weight in *lbs* to *kg*. 2) Find dose to give 10 *kg* patient; set up proportion and solve 3) Patient needs 2½ *grains*; set up D/A proportion 4) Measures on left are not in same unit so change gr → mg $\frac{gr\ 2\frac{1}{2}}{gr\ 1} = \frac{x\ mg}{60\ mg}$ → x = 150 mg 5) Rewrite and solve for x. Answer is in unit requested therefore **stop.**

Calculations Worksheet

1) **ORDER:** Drug A 100,000 units P.O.
AVAILABLE: Drug A 1,000,000 units per 20 cc
GIVE: _____ cc

2) **ORDER:** Drug C 0.35 mg P.O.
AVAILABLE: Drug C tabs. 0.7 mg
GIVE:_____ Tab (s)

3) **ORDER:** Drug D 60 mg P.O.
AVAILABLE: Drug D 15 mg per cc
GIVE: _____cc (s)

4) **ORDER:** Drug E 0.6 g P.O.
AVAILABLE: Drug E 400 mg in 2 cc
GIVE:_____ cc

5) **ORDER:** Drug F 45 mg I.M.
AVAILABLE: Drug F 50 mg in 2 cc
GIVE:_____ cc

6) **ORDER:** Drug G gr ¼ per kg body weight P.O.
AVAILABLE: Drug G 25 mg per 5 cc
BODY WEIGHT: 22 lbs.
GIVE:_____ cc

7) **The doctor orders 40 mg of Feldene per day. Feldene comes in 10 mg capsules. The patients should take the medication before breakfast and dinner. How many capsules should the patient take before each meal?**

8) **Drug A label reads 50 mg tablets. The doctor orders 75 mg three times a day. The nurse will administer _____ tablets per day.**

9) **ORDER:** Drug M 35 mg I.M.
AVAILABLE: Drug M 50 mg per cc
GIVE: _____cc

10) **ORDER: Drug N 15 mg per kg body weight P.O.**
AVAILABLE: Drug N 60 mg per cc
BODY WEIGHT: 220 lbs
GIVE: _____cc

11) **The doctor prescribed Tagamet 400 milligrams orally. The Tagamet label reads Tagamet liquid 200 milligrams in 5 milliliters. How many teaspoons will be given?**

12) **ORDER: Drug Q 300,000 units I.M.**
AVAILABLE: Drug Q 5,000,000 units in 25 cc
GIVE: _____cc

13) **ORDER: Drug S 0.15mg P.O.**
AVAILABLE: Drug S 0.3 mg tablets
GIVE: _____ Tab(s)

14) **ORDER: Drug T 50 mg P.O.**
AVAILABLE: Drug T 25 mg per 4 cc
GIVE: _____ cc

15) **ORDER: Drug U 0.4 g I.M.**
AVAILABLE: Drug U 500 mg in 2 cc
GIVE: _____ cc

16) **Gantrisin 0.75g (oral) is ordered. On hand is Gantrisin 250 mg tablets. How many tablets would you give the patient?**

17) **ORDER: Drug Y 85 mg I.M.**
AVAILABLE: Drug Y 100 mg in 2 cc
GIVE: _____cc

18) **ORDER: Drug Z 30 mg per kg body weight P.O.**
AVAILABLE: Drug Z 15 mg per cc
BODY WEIGHT: 22 lbs
GIVE: _____cc

19) **ORDER: Drug B 120 mg P.O.**
AVAILABLE: Drug B 60 mg per 15 cc
GIVE: _____ounce(s)

20) **ORDER: Drug D 0.125 mg S.Q.**
AVAILABLE: Drug D 0.500 mg per 2 cc
GIVE: _____ cc

21) **DESIRED: 200,000 units**
AVAILABLE: 10,000,000 units per 25 cc
GIVE: _____cc

22) **DESIRED: 60 mg**
AVAILABLE: 50 mg per 10 cc
GIVE:_____ cc

23) **DESIRED: 600 mg**
AVAILABLE: 1000 mg per 4 cc
GIVE:_____ cc

24) **The doctor orders 80 mg of liquid cough syrup. The cough syrup is labeled 100 mg in 5 ml. How many ml should the patient receive?**

25) **DESIRED: 15 mg per kg body weight**
AVAILABLE: 25 mg per 1 cc
BODY WEIGHT: 5.5 lbs
GIVE: _____ cc

26) **DESIRED: 130 mg**
AVAIALBLE: 200 mg per 2 cc
GIVE: _____ cc

27) **DESIRED: 750 mg**
AVAILABLE: 1 g per 2 cc
GIVE: _____ cc

28) **DESIRED: 10 mg**
AVAILABLE: 15 mg per 1.5 cc
GIVE: _____ cc

29) **DESIRED: 0.75 g**
AVAILABLE: 25 mg per 5 cc
GIVE: _____ cc

30) **DESIRED: 300 mg**
AVAILABLE: 0.6 g per cc
GIVE: _____ cc

31) **DESIRED: 5 mg**
AVAILABLE: 0.5 mg per 10 cc
GIVE: _____ cc

32) **DESIRED: 7.5 mg**
AVAILABLE: 30 mg per cc
GIVE: _____ cc

33) **DESIRED: 100 mg P.O.**
AVAILABLE: 1 g in 10 cc
GIVE: _____ cc

34) **DESIRED: 400 mg I.M.**
AVAIALBLE: 0.5 g per cc
GIVE: _____ cc

35) **DESIRED: 0.125 mg S.Q.**
AVAILABLE: 0.5 mg per 2 cc
GIVE: _____ cc

36) **DESIRED: 125 mg per kg body weight**
AVAILABLE: 0.25 g per cc
BODY WEIGHT: 22 lbs
GIVE: _____ cc

37) DESIRED: 450 mg P.O.
AVAILABLE: 300 mg per tablet
GIVE: _____ tab(s)

38) DESIRED: 75 mg P.O.
AVAILABLE: 15 mg per 2 cc
GIVE: _____ oz

39) The doctor ordered 400 mg of Ibuprofen every 6 hours. The label reads:

Ibuprofen tablets USP, 200 mg tablets

What should the nurse administer to the patient every 6 hours?

40) A client is ordered 37.5 milligrams of Dothiepin. 75 milligram tablets are available. How many tablets will you give?

Answers

1) 2 cc	**21) 0.5 cc**
2)0.5 tab	**22) 12 cc**
3) 4 cc	**23) 2.4 cc**
4) 3 cc	**24) 4 ml**
5) 1.8 cc	**25) 1.5 cc**
6) 30 cc	**26) 1.3 cc**
7) 2 capsules	**27) 1.5 cc**
8) 4.5 tabs	**28) 1 cc**
9) 0.7 cc	**29) 150 cc**
10) 25 cc	**30) 0.5 cc**
11) 2 tabs	**31) 100 cc**
12) 1.5 cc	**32) 0.25 cc**
13) 0.5 tab	**33) 1 cc**
14) 8 cc	**34) 0.8 cc**
15) 1.6 cc	**35) 0.5 cc**
16) 3 tabs	**36) 5 cc**
17) 1.7 cc	**37) 1.5 tabs**
18) 20 cc	**38) 0.33 oz**
19) 1 oz	**39) 2 tabs**
20) 0.5 cc	**40) 0.5tabs**

	Similar Problems
Video 1 #13	**2, 3, 5, 9, 14, 17, 20, 22, 23, 26, 28, 31, 32, 35, 37, 38, 39, 40**
Video 2 #4	**15, 27, 29, 30, 33, 34**
Video 3 #12	**1, 21**
Video 4 # 36	**6, 10, 18, 25**