

Math Review and Dosage Calculation Packet

Due prior to Dosage Calculation Exam in Week 6

Instructions

- 1. Complete the packet.**
- 2. *Use the separate Answer Sheet to record your answers.***
- 3. You can turn it in prior to the official due date.**
- 4. Required score - 80%**
- 5. For a score less than 80%, the student must attend a remediation class, which will be after the Dosage Calculation exam.**
- 6. Shown work may help in grading.**

IM 1 Medication Math Packet

1. A patient receives a 4 oz. bottle of cough syrup.
The instructions are to take 1 ½ teaspoons QID until finished.
How many days will the bottle last? Round to the whole number
2. Administer: azithromycin (Zithromax) 1.5 g PO daily in three divided doses
What is the dosage in mg per dose? Round to the whole number
3. Administer fluorouracil 6 mg/kg/day IV x 1 dose, not to exceed 800 mg per day
Available: 1 g/20 mL
The patient weighs 200 lbs
How many mL for the dose? Round to the whole number
Is the dose within the limit for a daily dose?

Use this information for Questions 4. and 5.

Order: 750 mg of medication to be given in 3 divided doses daily
Available: 125 mg/ 5 mL

4. How many mL of the medication should be given per dose?
 5. How many mg of the drug should be given per dose?
6. Administer buspirone (Buspar) 2.5 mg PO TID daily
Available: buspirone (Buspar) 40 mg/5 mL
What is the amount of the medication to deliver one dose? Round to the 10ths
 7. Available: cefuroxime (Ceftin) - 100 mg/10 mL
How many mL contain 125 mg of this medication? Round to the 10ths
 8. Order: Vasotec 10 mg PO bid
Available: Vasotec 2.5 mg/tablet
How many tablets should be administered for the day?
 9. Administer chloral hydrate 200 mg X 1 dose
Available: chloral hydrate 250 mg/mL
What volume should be administered? Round to the 10ths

10. Administer acetaminophen 500 mg X 1 dose
Available: acetaminophen 200 mg /3.5 mL
What volume should be administered? Round to the 10ths
11. Order: ampicillin 500 mg X 1 dose
Available: ampicillin 225 mg /7.5 mL
What volume should be administered? Round to the 10ths

Complete these conversions: Questions 12. to 20.

12. 30 mL = ? Tbsp
13. 17 kg = ? lbs
14. 480 mL = ? oz
15. 186 lbs = ? kg
16. 30 mL = ? oz
17. 480 mL = ? C
18. 80 kg = ? lbs
19. 30 mg = ? g
20. 5 tsp = ? mL

21. Calculate the fluid intake in mL for the items:
3 oz. grape juice + 6 oz. broth + 9 oz. coffee + 12 oz. soft drink
22. Order: Amoxicillin 500 mg PO daily
Available: Amoxicillin 0.25 g/5 mL
What is the dose in mL?

Use this information for Questions 23. and 24.

A patient is to take 2 teaspoons of a liquid medication every 6 hours x 8 days.

23. How many teaspoons per day?

24. How many teaspoons at the end of 8 days?
25. A patient's output for the 3 to 11 pm shift:
1500 Urine: 325 mL + Emesis: 75 mL
2100 Urine: 225 mL
2200 Nasogastric tube drainage: 200 mL
2300 Wound drain 50 mL of wound drainage
What is the amount in liters?

Complete these conversions: Questions 26. to 30.

26. 15 mL = ? oz
27. 10 mg = ? mcg
28. 50,000 mcg = ? g
29. 5000 g = ? kg
30. 3.5 oz = ? mL
31. Administer 2 g amoxicillin daily in 4 divided doses
Available: 500 mg capsules
How many mg per dose?
32. Order: clindamycin 250 mg IM every 12 hours
Available: 600 mg/3 mL
How many mL are required to administer a single dose? Round to the 10ths
33. Order: Give 30 mg Diphenhydramine IM now.
Available: 50 mg/mL
Patient's weight: 27.2 lbs
Knowing the range for Diphenhydramine is 1-2 mg/kg, is this a safe dose for the patient?
34. Using the information from question 33, What is the appropriate dose range for the patient?
35. Order: Administer 30 mL of solution every 12 hours.
What is the total volume needed for a week's supply of the medication?

36. Order: Administer 3 Levothyroxine sodium tabs PO daily.
Available: Levothyroxine 75 mcg/tablet.
How many mg will the patient take each day? Round to the 1000ths

Complete these conversions: Questions 37. to 39.

37. 0.0006 L = ? mL

38. 0.01 kg = ? g

39. 960 ml = ? oz.

40. Intake for a patient
8 oz glass of iced tea + 4 oz carton of orange juice + $\frac{3}{4}$ c
of ice cream + 32 oz of water + 1 $\frac{1}{2}$ L of D5W IV
What is the total intake in mL for this patient?
41. Order: bupropion SR 50 mg PO bid
Available are 100 mg scored tablets.
How many tablets per dose?
42. Order: Give Midazolam 0.1-0.2 mg/kg for sedation now.
Available 100 mg/50 mL
Pt weight 194 lbs
What is the minimum dose required?
43. Using the information from question 42, is 200 mg a safe dose?
44. Administer 750 mg cephalexin (Keflex) PO daily in 3 divided doses
Available: cephalexin (Keflex) 125 mg capsules
How many capsules per dose?

Complete these conversions: Questions 45. to 49. Do not round.

45. 375 mL = ? oz

46. 75 mcg = ? mg

47. 486 mg = ? g

48. 3755 g = ? kg

49. 1 ½ tsp = ? mL

50. Order: Medication 375 mg PO now
Available: 100 mg/scored tablet and 50 mg/scored tablet
How can the nurse best deliver the exact dose?
51. Administer a medication - 0.4 mg/kg/dose
Patient's weight: 88 lbs
Available: 2 mg/0.5 mL
What volume should be administered?
52. Order: Medication 0.075g PO X 1
Available: Medication 30 mg/scored
How many tablets would be administered? Round to the 10ths
53. Administer medication - 4.5 mg/kg now
Patient's weight: 50 kg
How many mg will be administered per dose?
54. Administer 250 mg PO daily of a medication
Available: 0.5 g/mL
What volume should be administered? Round to the 10ths
55. Order: Give Ketorolac 0.5 mg/kg for pain level of 4-6.
Available: Ketorolac 30 mg/mL
Patient weight: 35 lbs
What volume will be needed to give the desired dose?

56. When reconstituting Ceftriaxone for IM injection, the directions tell you to add 2.1 mL of 1% Lidocaine Hydrochloride for a final concentration of 350 mg/mL.
How many mL would be needed to provide a dose of 230 mg? Round to the nearest hundredth.
57. A patient is prescribed one Tbsp PO Q 6 for 5 days. How many total mL will need to be sent home with the patient to complete the treatment regimen?
58. Administer 3 mL of a medication PO TID.
Available: 60 mg/mL.
How many mg will be administered per day?
59. Available: Acetaminophen 160 mg /5 mL
Order: Acetaminophen 480 mg PO every 4 hours PRN fever greater than 100.4°
What volume should be administered for a single dose?
60. Order: Ibuprofen 800 mg q 3 hours PO prn for pain score of 4-6
Available: 150 mg/mL
How many mL are administered per dose? Round to the 10ths
61. Patient's weight: 50 lbs
Administer: ceftazidime (Fortaz) 50 mg/kg/day
Available: ceftazidime (Fortaz) 20 mg/mL
How many mL would be administered per day? Round to the 100ths
62. Administer Atropine 2.4 mg IM now
Available: Atropine 400 mcg/mL
What volume should be administered? Round to the 10ths
63. Administer chlorpromazine 16 mg X 1 dose
Available: chlorpromazine 5 mg /5 mL
What volume should be administered?
64. Administer atropine 0.4 mg is order IM now
Available: atropine 0.2 mg/0.5 mL
What volume should be administered?

Use this information for Questions 65. and 66.

Round both answers to the nearest whole number

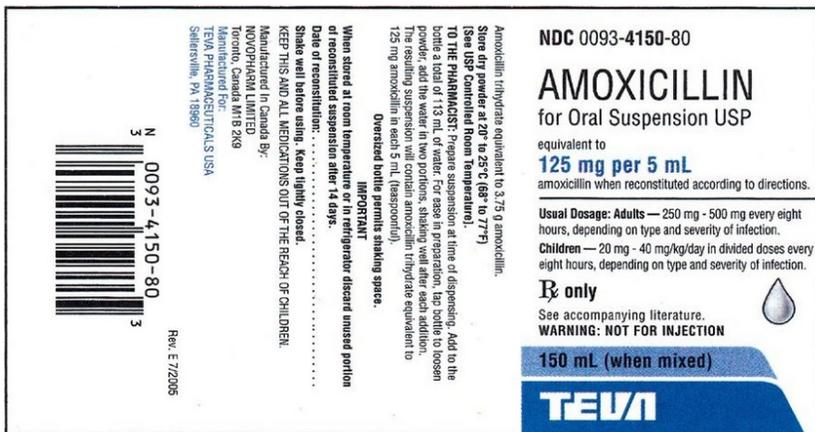
Order: Amoxicillin 250 mg PO q 6 hours
 Available: 750 mg/3 mL
 The bottle contains 60 mL.

65. How many mL will the nurse instruct the patient to take daily?

66. How many days will the bottle of medication last?

67. Order: 150 mg Carvedilol PO bid
 Available: 0.1 g scored tablets.
 How many tablets per day?

Use this information for Questions 68. to 74.



- A. Not for injection
- B. 125 mg/5 mL
- C. 113 mL
- D. Room temperature, discontinue after 14 days, shake well
- E. Water
- F. 150 mL
- G. Liquid - oral suspension

Match the answers - A. to G. - with the numbered question

68. Form _____

69. Volume used to dilute _____

70. Mix with this diluent _____

71. Dosage strength when reconstituted _____

72. Total volume when reconstituted _____

73. Warning _____

74. Instructions _____

75. Order: Aminophylline 40 milligrams intravenously once.
Available: Aminophylline 250 mg/10 mL liquid for IV injection.
How many mL should the nurse administer? Round to the 10ths

76. Order: 13 mg of morphine sulfate by intramuscular injection every 4 hours PRN pain level 4-6
Available: morphine sulfate 5 mg/mL
How many mL should the nurse administer per dose? Round to the 10ths

77. Order: Administer Ampicillin 50 mg/kg/day divided into 4 equal doses
Pt's weight - 22 lbs
How many mg would be administered per dose?

Use this information for Questions 78. to 80.

The prescriber has ordered potassium penicillin G 125,000 units by injection for a patient.

Available is a vial of powdered potassium Penicillin G labeled 1,000,000 units.

Using each of the dilutions from the label below, what volume of the final concentration would be administered?

Round to the 10ths

		Preparation of solution:	
		Diluent Added	Final Concentration
78.		9.6 ml	100,000 units/ml
79.		4.6 ml	200,000 units/ml
80.		3.6 ml	250,000 units/ml

Answer Sheet

Student Name: _____

1.	21.	41.	61.
2.	22.	42.	62.
3.	23.	43.	63.
4.	24.	44.	64.
5.	25.	45.	65.
6.	26.	46.	66.
7.	27.	47.	67.
8.	28.	48.	68.
9.	29.	49.	69.
10.	30.	50.	70.
11.	31.	51.	71.
12.	32.	52.	72.
13.	33.	53.	73.
14.	34.	54.	74.
15.	35.	55.	75.
16.	36.	56.	76.
17.	37.	57.	77.
18.	38.	58.	78.
19.	39.	59.	79.
20.	40.	60.	80.