Dosage Calculations 2nd edition Giangrasso Test Bank

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Giangrasso, *Dosage Calculations: A Multi-Method Approach*, 2/e Test Bank
Chapter 2 Safe and Accurate Medication Administration

Question 1

Type: FIB

Read the label and find the following information:

Strength of the drug _____ mg per tablet

Standard Text:

Correct Answer: 2.5

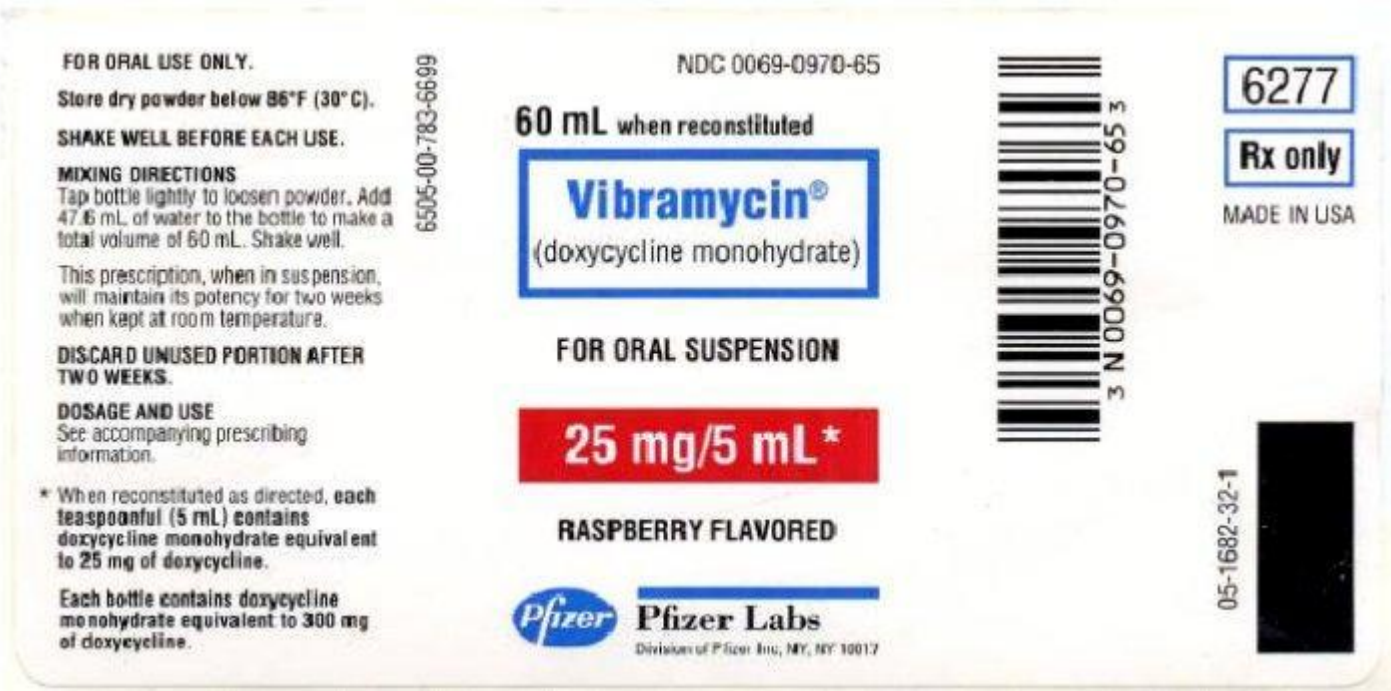
Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 2

Type: FIB



Read the label and find the following information:

Strength of the drug _____ mg/5 mL

Standard Text:

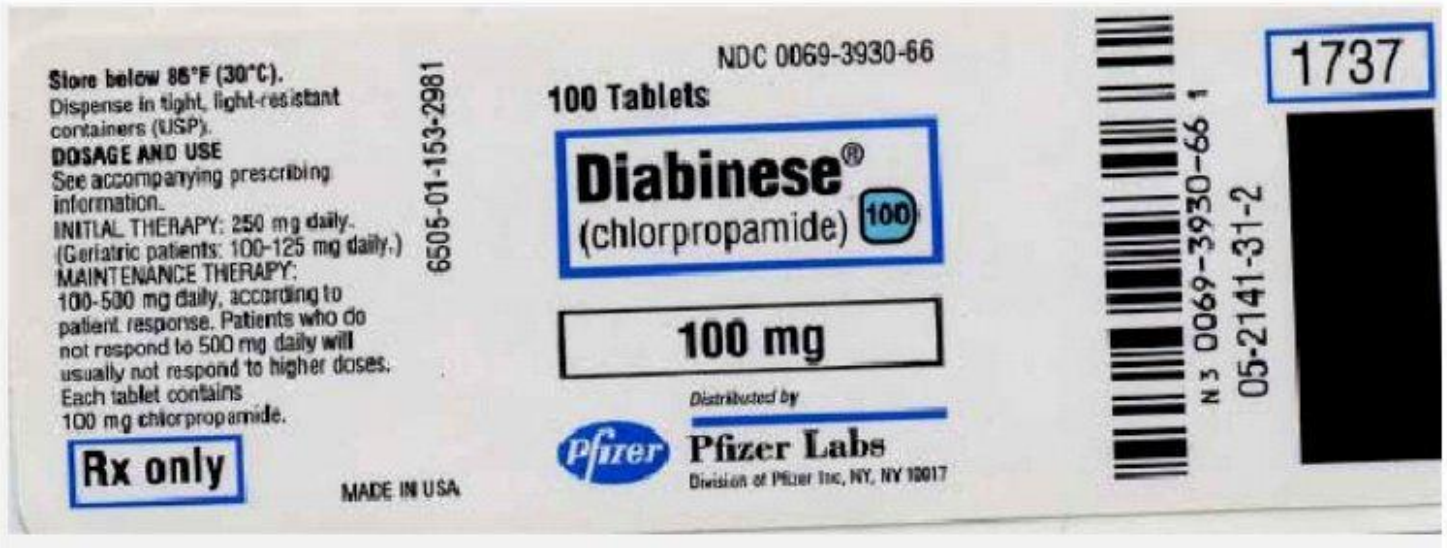
Correct Answer: 25

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 3
Type: FIB



Read the label and find the following information:

Strength of the drug _____ mg per tablet

Standard Text:

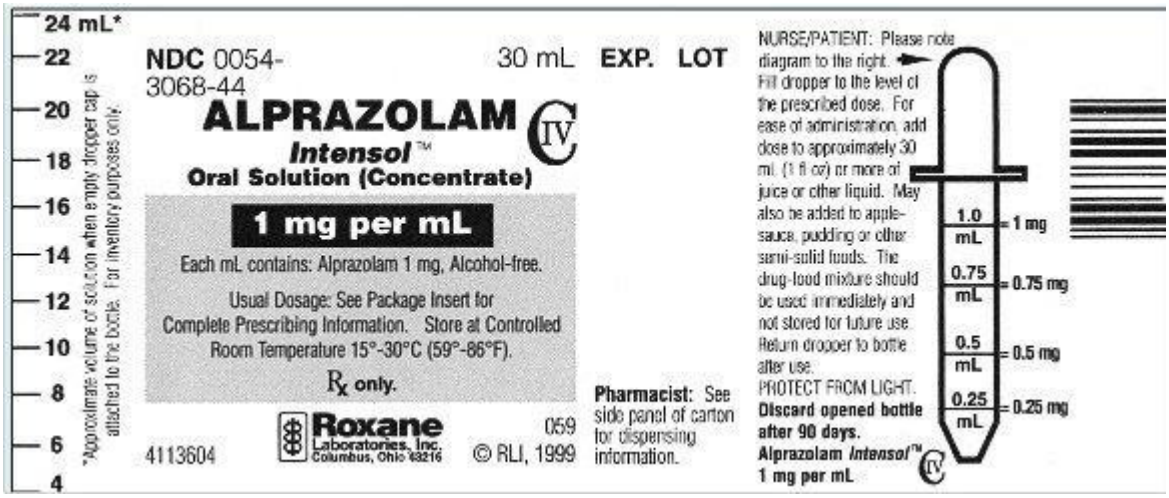
Correct Answer: 100

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 4
Type: FIB



Read the label and find the following information:

Strength of the drug _____ mg per mL

Standard Text:

Correct Answer: true

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 5
Type: FIB

A physician's order sheet contains the following entry:

Biaxin (*clarithromycin*) 7.5 mg/kg p.o. q.12h.

How much of the drug will be administered per dose? ___ mg for every kg of bodyweight

Standard Text:

Correct Answer: 7.5

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 6
Type: FIB

A physician's order sheet contains the following entry:

Trandate (*labetalol hydrochloride*) 20 mg IV STAT and repeat q.10 minutes as needed to max of 300 mg.

How much of the drug will be administered per dose? _____ mg

Standard Text:

Correct Answer: 20

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 7
Type: FIB

A physician's order sheet contains the following entry:

Lanoxin (*digoxin*) 125 mcg p.o. daily.

How much of the drug will be administered per dose? _____ micrograms

Standard Text:

Correct Answer: 125

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:

Nursing/Integrated Concepts:
Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 8
Type: FIB

A physician's order sheet contains the following entry:

Paral (*paraldehyde*) 5 mg p.r. stat.

How much of the drug will be administered per dose? _____ mg

Standard Text:

Correct Answer: 5

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 9
Type: MCSA

Red Check Initial	Order Date	Initial	Exp. Date	Medication, Dosage, Frequency, and Route	Hours	9/10/08	9/11/08	9/13/08
	9/10/08	DM	10/10/08	LANOXIN (DIGOXIN) 0.125MG P.O. DAILY	1000	DM	DM	DM
	9/10/08	DM	10/10/08	LASIX (FUROSEMIDE) 40 MG IV STAT AND THEN Q AM	0800	DM	DM	DM
	9/10/08	DM	10/10/08	K-DUR (POTASSIUM CHLORIDE) 40 MEQ P.O. DAILY	1000	DM	DM	DM
	9/12/08	DM	9/19/08	REGLAN (METOCLOPRAMIDE HYDROCHLORIDE) 10 MG AC AND HS	0900			
					1300			DM
					1800			DM
					2200			DM

Figure C1 - MAR

Review the information provided in the figure. What medication is given more than once per day?

1. Lanoxin

2. Lasix

3. K-dur

4. Reglan

Correct Answer: 4

Rationale 1:

Rationale 2:

Rationale 3:

Rationale 4:

Global Rationale: Only Reglan is ordered to be, and has been, administered more than once per day.

Cognitive Level:

Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 10
Type: MCSA

Red Check Initial	Order Date	Initial	Exp. Date	Medication, Dosage, Frequency, and Route	Hours	9/10/08	9/11/08	9/13/08
	9/10/08	DM	10/10/08	LANOXIN (DIGOXIN) 0.125MG P.O. DAILY	1000	DM	DM	DM
	9/10/08	DM	10/10/08	LASIX (FUROSEMIDE) 40 MG IV STAT AND THEN Q AM	0800	DM	DM	DM
	9/10/08	DM	10/10/08	K-DUR (POTASSIUM CHLORIDE) 40 MEQ P.O. DAILY	1000	DM	DM	DM
	9/12/08	DM	9/19/08	REGLAN (METOCLOPRAMIDE HYDROCHLORIDE) 10 MG AC AND HS	0900			
					1300			DM
					1800			DM
					2200			DM

Figure C1 - MAR

Review the information provided in the figure. What medication was given at 8:00 a.m.?

1. Lanoxin

2. Lasix

3. K-dur

4. Reglan

Correct Answer: 2

Rationale 1:

Rationale 2:

Rationale 3:

Rationale 4:

Global Rationale: Lasix was administered at 0800 as indicated in the column titled "hours" on 9/10, 9/11, and 9/12.

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 11
Type: MCSA

Red Check Initial	Order Date	Initial	Exp. Date	Medication, Dosage, Frequency, and Route	Hours	9/10/08	9/11/08	9/13/08
	9/10/08	DM	10/10/08	LANOXIN (DIGOXIN) 0.125MG P.O. DAILY	1000	DM	DM	DM
	9/10/08	DM	10/10/08	LASIX (FUROSEMIDE) 40 MG IV STAT AND THEN Q AM	0800	DM	DM	DM
	9/10/08	DM	10/10/08	K-DUR (POTASSIUM CHLORIDE) 40 MEQ P.O. DAILY	1000	DM	DM	DM
	9/12/08	DM	9/19/08	REGLAN (METOCLOPRAMIDE HYDROCHLORIDE) 10 MG AC AND HS	0900			
					1300			DM
					1800			DM
					2200			DM

Figure C1 - MAR

Review the information provided in the figure. What medication is administered intravenously?

1. Lanoxin

2. Lasix

3. K-dur

4. Reglan

Correct Answer: 2

Rationale 1:

Rationale 2:

Rationale 3:

Rationale 4:

Global Rationale: Only Lasix is ordered for IV administration. The other medications are ordered for oral administration.

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 12
Type: MCSA

Red Check Initial	Order Date	Initial	Exp. Date	Medication, Dosage, Frequency, and Route	Hours	9/10/08	9/11/08	9/13/08
	9/10/08	DM	10/10/08	LANOXIN (DIGOXIN) 0.125MG P.O. DAILY	1000	DM	DM	DM
	9/10/08	DM	10/10/08	LASIX (FUROSEMIDE) 40 MG IV STAT AND THEN Q AM	0800	DM	DM	DM
	9/10/08	DM	10/10/08	K-DUR (POTASSIUM CHLORIDE) 40 MEQ P.O. DAILY	1000	DM	DM	DM
	9/12/08	DM	9/19/08	REGLAN (METOCLOPRAMIDE HYDROCHLORIDE) 10 MG AC AND HS	0900			
					1300			DM
					1800			DM
					2200			DM

Figure C1 - MAR

Review the information provided in the figure. How many doses of Reglan has the client received?

1. 1

2. 2

3. 3

4. 4

Correct Answer: 3

Rationale 1:

Rationale 2:

Rationale 3:

Rationale 4:

Global Rationale: The client has received three doses of Reglan administered on 9/12. While four doses are ordered per day, the 0900 dose was not given and is most likely due to the order being received.

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 13
Type: MCSA

Red Check Initial	Order Date	Initial	Exp. Date	Medication, Dosage, Frequency, and Route	Hours	9/10/08	9/11/08	9/13/08
	9/10/08	DM	10/10/08	LANOXIN (DIGOXIN) 0.125MG P.O. DAILY	1000	DM	DM	DM
	9/10/08	DM	10/10/08	LASIX (FUROSEMIDE) 40 MG IV STAT AND THEN Q AM	0800	DM	DM	DM
	9/10/08	DM	10/10/08	K-DUR (POTASSIUM CHLORIDE) 40 MEQ P.O. DAILY	1000	DM	DM	DM
	9/12/08	DM	9/19/08	REGLAN (METOCLOPRAMIDE HYDROCHLORIDE) 10 MG AC AND HS	0900			
					1300			DM
					1800			DM
					2200			DM

Figure C1 - MAR

Review the information provided in the figure. What medication was administered immediately?

1. Lanoxin

2. Lasix

3. K-dur

4. Reglan

Correct Answer: 2

Rationale 1:

Rationale 2:

Rationale 3:

Rationale 4:

Global Rationale: Lasix was ordered for STAT, or immediate, administration and then to be given daily after the STAT dose.

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 14
Type: FIB

Medication	Hours	9/11	9/12	9/13	9/14	9/15	9/16	9/17
ampicillin 1 g IVPB q.6h.	0600	X	CF	CF	CR	CR		
	1200	X	CK	CK	CR	CR		
	1800	X	CK	CK	CK	CK		
	2400	CF	CR	CR	CK	CF		
digoxin 0.125 mg p.o. daily	0900	SS	CK	CK	CR	CR		
Coumadin 5 mg p.o. daily	0900	SS	CK	CK	CR	CR		
furosemide 40 mg IM stat.	1900	X	X	CK	X	X		

Read the MAR in the table and answer the following question.

How many doses of ampicillin has the patient received?

Standard Text:

Correct Answer: 17

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 15
Type: FIB

Medication	Hours	11/01 Sun	11/02 Mon	11/03 Tues	11/04 Wed	11/05 Thur	11/06 Fri	11/07 Sat
amlodipine 5 mg p.o. daily	10:00 a.m.	SL	SL	SL	LK	LK		
Epogen 2,000 units subcutaneously three times a week (M/W/F)	10:00 a.m.	X	SL	X	LK	X	X	
Humulin NPH insulin U-100 46 units subcut. AC breakfast	6:30 a.m.	JL	JL	JL	MW	MW		
Colace 100 mg p.o. b.i.d.	10:00 a.m. 2:00 p.m.	SL SL	SL SL	SL SL	LK LK	LK LK		
acetaminophen 650 mg p.o. p.r.n. Temp 102°F or higher								

Read the table and find the following information:

How many doses of Epogen has the patient received?

Standard Text:

Correct Answer: 2

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 16
Type: FIB

Medication	Hours	9/11	9/12	9/13	9/14	9/15	9/16	9/17
Ampicillin 1 g IVPB q.6h.	0600	X	CF	CF	CR	CR		
	1200	X	CK	CK	CR	CR		
	1800	X	CK	CK	CK	CK		
	2400	CF	CR	CR	CK	CF		
digoxin 0.125 mg p.o. daily	0900	SS	CK	CK	CR	CR		
Coumadin 5 mg p.o. daily	0900	SS	CK	CK	CR	CR		
furosemide 40 mg IM stat.	1900	X	X	CK	X	X		

Read the table and find the following information:

How many doses of Coumadin has the patient received?

Standard Text:

Correct Answer: 5

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 17
Type: FIB

DOSAGE AND ADMINISTRATION

ZONEGRAN (zonisamide) is recommended as adjunctive therapy for the treatment of partial seizures in adults. Safety and efficacy in pediatric patients below the age of 16 have not been established. ZONEGRAN should be administered once or twice daily, using 25 mg, 50 mg or 100 mg capsules. ZONEGRAN is given orally and can be taken with or without food. Capsules should be swallowed whole.

Adults over Age 16: The prescriber should be aware that, because of the long half-life of zonisamide, up to two weeks may be required to achieve steady state levels upon reaching a stable dose or following dosage adjustment. Although the regimen described below is one that has been shown to be tolerated, the prescriber may wish to prolong the duration of treatment at the lower doses in order to fully assess the effects of zonisamide at steady state, noting that many of the side effects of zonisamide are more frequent at doses of 300 mg per day and above. Although there is some evidence of greater response at doses above 100–200 mg/day, the increase appears small and formal dose-response studies have not been conducted.

The initial dose of ZONEGRAN should be 100 mg daily. After two weeks, the dose may be increased to 200 mg/day for at least two weeks. It can be increased to 300 mg/day and 400 mg/day, with the dose stable for at least two weeks to achieve steady state at each level. Evidence from controlled trials suggests that ZONEGRAN doses of 100–600 mg/day are effective, but there is no suggestion of increasing response above 400 mg/day (see **CLINICAL PHARMACOLOGY, Clinical Studies** subsection). There is little experience with doses greater than 600 mg/day.

Patients with Renal or Hepatic Disease: Because zonisamide is metabolized in the liver and excreted by the kidneys, patients with renal or hepatic disease should be treated with caution, and might require slower titration and more frequent monitoring (see **CLINICAL PHARMACOLOGY** and **PRECAUTIONS**).

HOW SUPPLIED

ZONEGRAN is available as 25 mg, 50 mg and 100 mg two-piece hard gelatin capsules. The capsules are printed in black with "Eisai" and "ZONEGRAN 25," "ZONEGRAN 50," or "ZONEGRAN 100," respectively. ZONEGRAN is available in bottles of 100 with strengths and colors as follows:

Dosage Strength	Capsule Colors	NDC #
25 mg	White opaque body with white opaque cap.	62856-681-10
50 mg	White opaque body with gray opaque cap.	62856-682-10
100 mg	White opaque body with red opaque cap.	62856-680-10

Read the package insert in the figure and answer the following:

What is the initial recommended maximum adult daily dose of the drug? _____ mg

Standard Text:

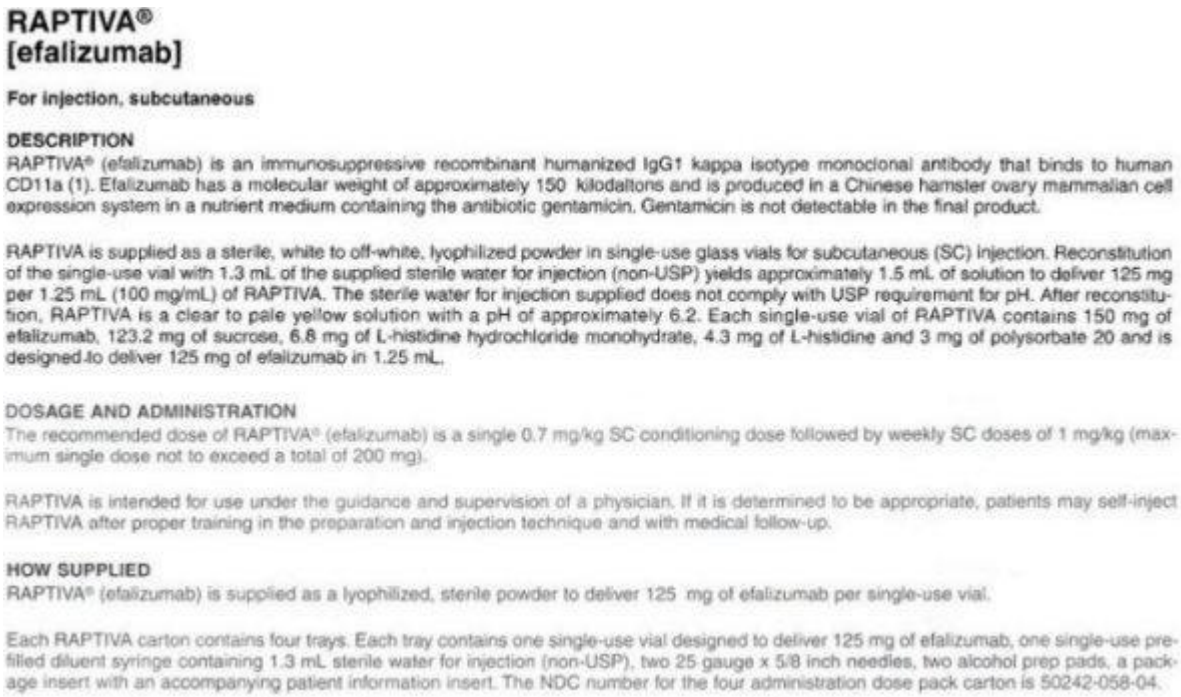
Correct Answer: 100

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 18
Type: FIB



RAPTIVA®
[efalizumab]

For injection, subcutaneous

DESCRIPTION
RAPTIVA® (efalizumab) is an immunosuppressive recombinant humanized IgG1 kappa isotype monoclonal antibody that binds to human CD11a (1). Efalizumab has a molecular weight of approximately 150 kilodaltons and is produced in a Chinese hamster ovary mammalian cell expression system in a nutrient medium containing the antibiotic gentamicin. Gentamicin is not detectable in the final product.

RAPTIVA is supplied as a sterile, white to off-white, lyophilized powder in single-use glass vials for subcutaneous (SC) injection. Reconstitution of the single-use vial with 1.3 mL of the supplied sterile water for injection (non-USP) yields approximately 1.5 mL of solution to deliver 125 mg per 1.25 mL (100 mg/mL) of RAPTIVA. The sterile water for injection supplied does not comply with USP requirement for pH. After reconstitution, RAPTIVA is a clear to pale yellow solution with a pH of approximately 6.2. Each single-use vial of RAPTIVA contains 150 mg of efalizumab, 123.2 mg of sucrose, 6.8 mg of L-histidine hydrochloride monohydrate, 4.3 mg of L-histidine and 3 mg of polysorbate 20 and is designed to deliver 125 mg of efalizumab in 1.25 mL.

DOSAGE AND ADMINISTRATION
The recommended dose of RAPTIVA® (efalizumab) is a single 0.7 mg/kg SC conditioning dose followed by weekly SC doses of 1 mg/kg (maximum single dose not to exceed a total of 200 mg).

RAPTIVA is intended for use under the guidance and supervision of a physician. If it is determined to be appropriate, patients may self-inject RAPTIVA after proper training in the preparation and injection technique and with medical follow-up.

HOW SUPPLIED
RAPTIVA® (efalizumab) is supplied as a lyophilized, sterile powder to deliver 125 mg of efalizumab per single-use vial.

Each RAPTIVA carton contains four trays. Each tray contains one single-use vial designed to deliver 125 mg of efalizumab, one single-use prefilled diluent syringe containing 1.3 mL sterile water for injection (non-USP), two 25 gauge x 5/8 inch needles, two alcohol prep pads, a package insert with an accompanying patient information insert. The NDC number for the four administration dose pack carton is 50242-058-04.

Read the package insert in the figure and answer the following:

What is the maximum dosage? _____ mg

Standard Text:

Correct Answer: 200

Rationale:

Global Rationale:

Cognitive Level:

Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 19
Type: FIB

INDICATIONS AND USAGE

DETROL LA Capsules are once daily extended release capsules indicated for the treatment of overactive bladder with symptoms of urge urinary incontinence, urgency, and frequency.

CONTRAINDICATIONS

DETROL LA Capsules are contraindicated in patients with urinary retention, gastric retention, or uncontrolled narrow-angle glaucoma. DETROL LA is also contraindicated in patients who have demonstrated hypersensitivity to the drug or its ingredients.

PRECAUTIONS

General

Risk of Urinary Retention and Gastric Retention: DETROL LA Capsules should be administered with caution to patients with clinically significant bladder outflow obstruction because of the risk of urinary retention and to patients with gastrointestinal obstructive disorders, such as pyloric stenosis, because of the risk of gastric retention (see **CONTRAINDICATIONS).**

Controlled Narrow-Angle Glaucoma: DETROL LA should be used with caution in patients being treated for narrow-angle glaucoma.

Reduced Hepatic and Renal Function: For patients with significantly reduced hepatic function or renal function, the recommended dose for DETROL LA is 2 mg daily (see **CLINICAL PHARMACOLOGY, Pharmacokinetics in Special Populations).**

DOSAGE AND ADMINISTRATION

The recommended dose of DETROL LA Capsules are 4 mg daily. DETROL LA should be taken once daily with liquids and swallowed whole. The dose may be lowered to 2 mg daily based on individual response and tolerability, however, limited efficacy data is available for DETROL LA 2 mg (see **CLINICAL STUDIES).**

For patients with significantly reduced hepatic or renal function or who are currently taking drugs that are potent inhibitors of CYP3A4, the recommended dose of DETROL LA is 2 mg daily (see **CLINICAL PHARMACOLOGY** and **PRECAUTIONS, Drug Interactions).**

HOW SUPPLIED

DETROL LA Capsules 2 mg are blue-green with symbol and 2 printed in white ink. DETROL LA Capsules 4 mg are blue with symbol and 4 printed in white ink. DETROL LA Capsules are supplied as follows:

Bottles of 30		Bottles of 500	
2 mg Capsules	NDC 0009-5190-01	2 mg Capsules	NDC 0009-5190-03
4 mg Capsules	NDC 0009-5191-01	4 mg Capsules	NDC 0009-5191-03
Bottles of 90		Unit Dose Blisters	
2 mg Capsules	NDC 0009-5190-02	2 mg Capsules	NDC 0009-5190-04
4 mg Capsules	NDC 0009-5191-02	4 mg Capsules	NDC 0009-5191-04

Store at 25°C (77°F); excursions permitted to 15-30°C (59-86°F) [see USP Controlled Room Temperature]. Protect from light.

Read the package insert in the figure, and answer the following:

What is the maximum daily dose? _____ mg

Standard Text:

Correct Answer: 4

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 20
Type: MCSA

The physician orders a medication to be administered q8h. The first dose is given at 6:00 a.m. What times will this medication be given throughout the day in military time?

1. 0600h - 1400h - 2200h

2. 0600h - 1300h - 2200h

3. 0800h - 1800h - 2400h

4. 0200h - 1000h - 1800h

Correct Answer: 1

Rationale 1:

Rationale 2:

Rationale 3:

Rationale 4:

Global Rationale: The medication was administered at 06:00 a.m., which is 0600h in military time. Adding 8 hours to 0600h would be 0600h + 0800h = 1400h in military time. The next dose would be given 8 hours later or 1400h + 0800h = 2200h. The times of administration are 0600h - 1400h - 2200h.

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 21
Type: MCSA

A patient is to receive a medication q.8h. The first dose was administered at 10:00 a.m. What is the time of the next dose in military time?

1. 0600h

2. 1800h

3. 1400h

4. 1600h

Correct Answer: 2

Rationale 1:

Rationale 2:

Rationale 3:

Rationale 4:

Global Rationale: 10 a.m. and 8 hours = 6 p.m., written in military time is 1800h.

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 22

Type: FIB

A patient is to receive a medication every twelve hours. The first dose was administered at 2100h. At what time will the next dose be administered (expressed as standard time)? ____ a.m. on the next day.

Standard Text:

Correct Answer: 9

Rationale:

Global Rationale:

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 23

Type: MCSA

The client receives nimodipine at 2200h and is to receive the next dose in four hours. At what time, written as standard time, will the next dose be administered?

1. 1:00 a.m.

2. 2:00 a.m.

3. 4:00 a.m.

4. 4:00 p.m.

Correct Answer: 2

Rationale 1:

Rationale 2:

Rationale 3:

Rationale 4:

Global Rationale: The medication was administered at 2200h which is 10:00 p.m. Four hours later would be 02:00 a.m.

Cognitive Level:
Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 24
Type: MCSA

If an IV starts at 1800 hours and lasts for 12 hours, at what time will it finish? (Express in standard time.)

1. 8 a.m.

2. 8 p.m.

3. 6 a.m.

4. 6 p.m.

Correct Answer: 3

Rationale 1:

Rationale 2:

Rationale 3:

Rationale 4:

Global Rationale: 1800h is 6 p.m. 12 hours later is 6 a.m.

Cognitive Level:

Client Need:
Client Need Sub:
Nursing/Integrated Concepts:
Learning Outcome: 2.7 Identify and interpret the components of a Drug Prescription, Physician's Order, and Medication Administration Record.

Question 25
Which of the following is not one of the six rights of medication administration?

Type: NCLEX M/C

1. Drug

2. Route

3. Pharmacy

4. Documentation

Correct Answer: 3

Global Rationale: The six rights of medication administration include right drug, dose, route and form, time, client and documentation.

Learning Outcome: 2.1 Describe the six "rights" of safe medication administration.

Question 26

The standard adult dosage for each drug is determined by:

Type: NCLEX M/C

1. the prescriber

2. the manufacturer

3. the hospital formulary

4. the pharmacist

Correct Answer: 2

Global Rationale: The standard adult dosage for each drug is determined by its manufacturer.

Learning Outcome: 2.1 Describe the six "rights" of safe medication administration.

Question 27

"Right" documentation includes the name, dosage, route, and time of administration. When should you sign your initials on the medication administration record?

Type: NCLEX M/C

1. Immediately before the dose is given, when in the patient room

2. Immediately after the dose is given

3. Immediately before the dose is given, in the medication room

4. Within one hour after administering the medication

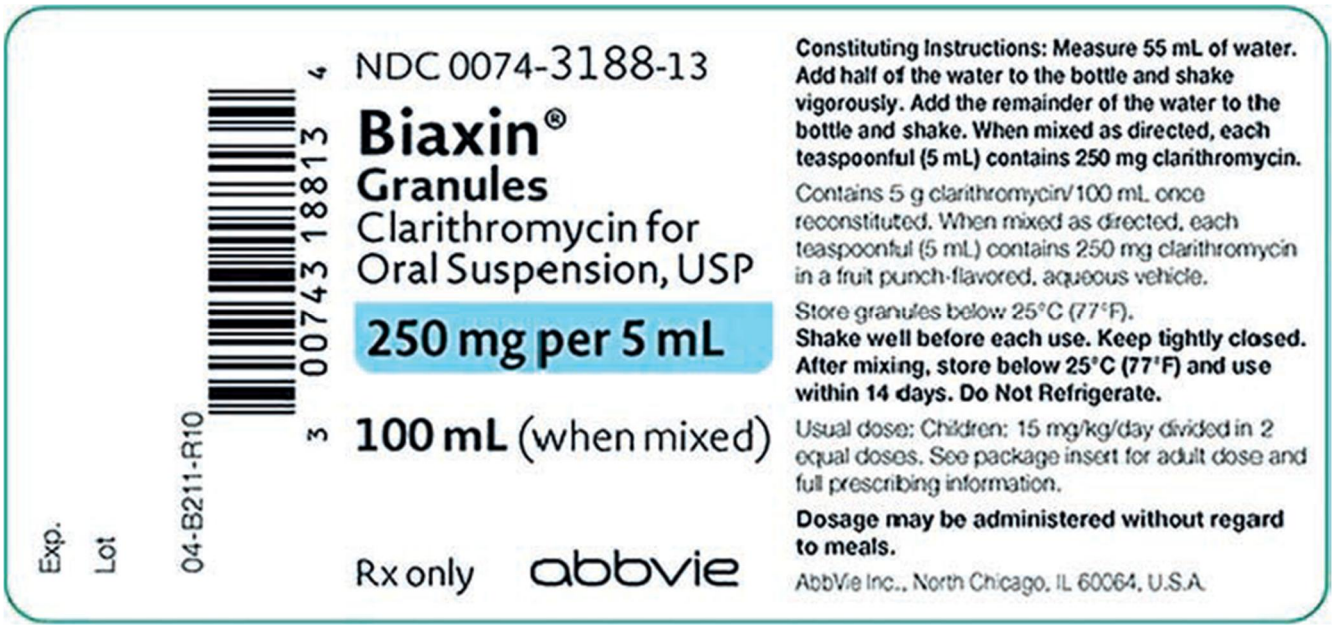
Correct Answer: 2

Global Rationale: Initials should be signed on the medication administration record immediately, but never before the dose is administered.

Learning Outcome: 2.1 Describe the six "rights" of safe medication administration.

Question 28

What is the trade name of the following medication?



Type:

1. Biaxin

2. Clarithromycin

3. AbbVie

4. Granules

Correct Answer: 1

Global Rationale: Trade names of medications will have the trademark symbol beside it OR have the first letter of the name in an uppercase letter.

Learning Outcome: 2.5 Compare the trade and generic names of drugs.

Question 29

What is the generic name of the following medication?

Type: NCLEX M/C

1. Lexapro

2. escitalopram oxalate

3. Lundbeck

4. oxalate

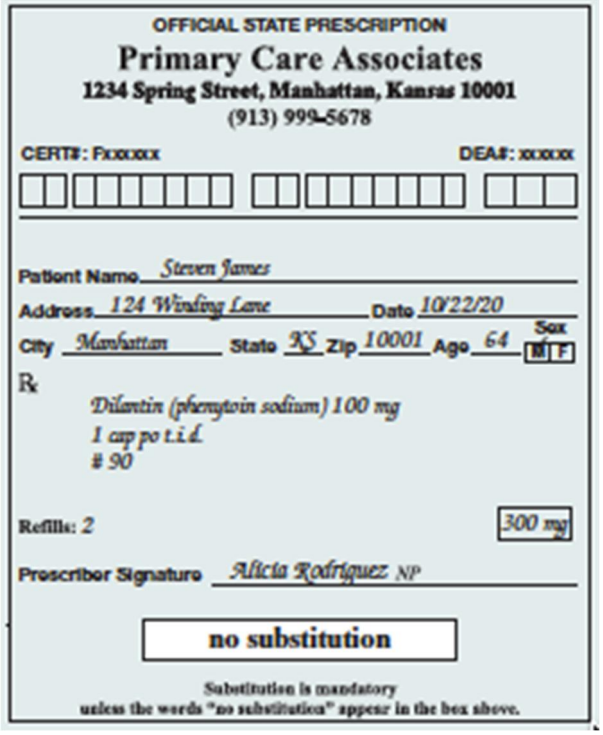
Correct Answer: 2

Global Rationale: Generic medication names will begin with a lowercase letter.

Learning Outcome: 2.5 Compare the trade and generic names of medications.

Question 30

Using the following image, how many times will you instruct the patient to take the medication?


OFFICIAL STATE PRESCRIPTION

Primary Care Associates

1234 Spring Street, Manhattan, Kansas 10001

(913) 999-5678

CERT#: Fxxxxx DEA#: xxxxx

Patient Name Steven James

Address 124 Winding Lane Date 10/22/20

City Manhattan State KS Zip 10001 Age 64 Sex M F

℞

Dilantin (phenytoin sodium) 100 mg

1 cap po t.i.d.

90

Refills: 2 300 mg

Prescriber Signature Alicia Rodriguez NP

no substitution

Substitution is mandatory unless the words "no substitution" appear in the box above.

Type: NCLEX M/C

1. Once per day

2. Twice per day

3. Three times per day

4. Weekly

Correct Answer: 3

Global Rationale: The prescription indicates a frequency of t.i.d = three times per day.

Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 31

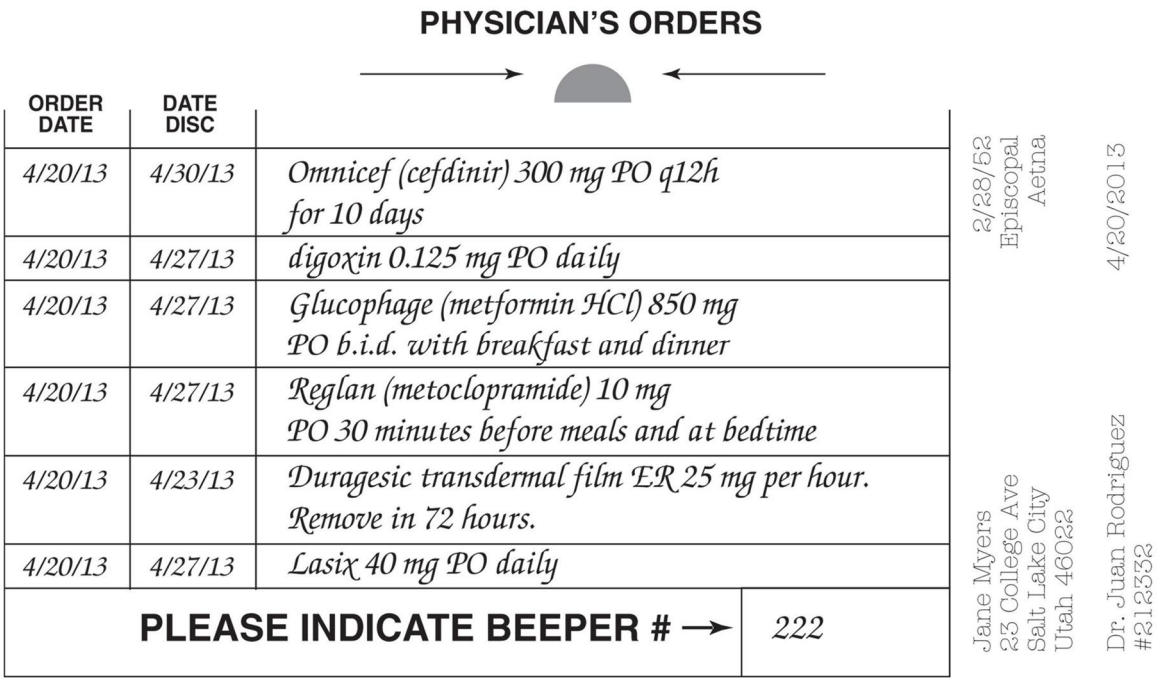
Using the image below:

1. The metformin HCl is given _____times per day.

2. 0.125 mg of _____is to be given daily.

3. Reglan is to be given 30 minutes _____meals and at bedtime.

4. The Duragesic film is to be removed in _____hours.



PHYSICIAN'S ORDERS

ORDER DATE	DATE DISC	
4/20/13	4/30/13	Omnicef (cefdinir) 300 mg PO q12h for 10 days
4/20/13	4/27/13	digoxin 0.125 mg PO daily
4/20/13	4/27/13	Glucophage (metformin HCl) 850 mg PO b.i.d. with breakfast and dinner
4/20/13	4/27/13	Reglan (metoclopramide) 10 mg PO 30 minutes before meals and at bedtime
4/20/13	4/23/13	Duragesic transdermal film ER 25 mg per hour. Remove in 72 hours.
4/20/13	4/27/13	Lasix 40 mg PO daily
PLEASE INDICATE BEEPER # →		222

2/28/52
Episcopal
Aetna

4/20/2013

Jane Myers
23 College Ave
Salt Lake City
Utah 46022

Dr. Juan Rodriguez
#212332

Type: FIB

Correct Answers:

1. Twice

2. Digoxin

3. Before

4. 72

Rationale 1: The order reads b.i.d. = twice per day.

Rationale 2: As written on the MAR

Rationale 3: As written on the MAR

Rationale 4: As written on the MAR

Global Rationale:

Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 32

The physician orders Morphine sulfate 5 mg q4h prn for pain. What is missing from this order?

Type: non-NCLEX M/C

1. Route

2. Frequency

3. Dose

4. Reason

Correct Answer: 1

Global Rationale: A medication order must include the name of the medication, the dose, the route, the frequency of administration, and the reason for the medication.

Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 33

The physician's order reads: Timoptic (timolol maleate) 0.5% ophthalmic solution 1 drop to right eye. What information is missing from the order?

Type: non-NCLEX M/C

1. Route

2. Dose

3. Frequency

4. Reason

Correct Answer: 3

Global Rationale: A medication order must include the name of the medication, the dose, the route, the frequency of administration, and the reason for the medication.

Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 34

The doctor's order from May 01, 2050, reads: Morphine sulfate 5 mg subcutaneously q3h prn for pain. Expires: May 3, 2050. You administer the first dose on May 02, 2050, at 1455hrs. Fill in the MAR below.

PRN Medication		**Medication Dosage Route & Time**	**Doses Given**				
Order Date	Expiration Date		Date				
			Time				
			Initial				

Type: Long hand/essay

Correct Answer:

PRN Medication		Medication Dosage Route & Time	Doses Given				
Order Date	Expiration Date	Morphine 5mg subcutaneously q3h prn	Date	May 2, 2050			
May 1, 2050	May 3, 2050		Time	1455			
			Initial	*AB*			

Global Rationale:

Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 35

The doctor's order from March 3, 2050, reads: metformin 500 mg t.i.d. p.o. You administer the doses at 0700 and 1500 on March 5, 2050. The order expires one week after it was initially written. Fill in the MAR below.

Medication		Medication Dosage Route & Time	Doses Given				
Order Date	**Expiration Date**		**Date**				
			Time				
			Initial				
			Time				
			Initial				
			Time				
			Initial				

Type: Long hand/essay

Correct Answer:

Medication		**Medication Dosage Route & Time**	**Doses Given**				
Order Date	**Expiration Date**		**Date**	March 3, 2050	March 4, 2050	March 5, 2050	
March 3, 2050			**Time**	0700	0700	0700	
			Initial		*AB*	*AB*	
			Time		1500	1500	
			Initial		*AB*	*AB*	
			Time	2300	2300	2300	
			Initial	*CD*	*CD*	*CD*	

Global Rationale:

Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 36

Using the package insert found in the image. Answer the questions below:

HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use ALIMTA safely and effectively. See full prescribing information for ALIMTA.

ALIMTA (pemetrexed disodium) Injection, Powder, Lyophilized, For Solution for Intravenous Use

Initial U.S. Approval: 2004

---------- INDICATIONS AND USAGE ----------

ALIMTA® is a folate analog metabolic inhibitor indicated for:

- Locally Advanced or Metastatic Nonsquamous Non-Small Cell Lung Cancer:
  - Initial treatment in combination with cisplatin. (1.1)
  - Maintenance treatment of patients whose disease has not progressed after four cycles of platinum-based first-line chemotherapy. (1.2)
  - After prior chemotherapy as a single agent. (1.3)
- Mesothelioma: in combination with cisplatin. (1.4)

Limitations of Use:

- ALIMTA is not indicated for the treatment of patients with squamous cell non-small cell lung cancer. (1.5)

---------- DOSAGE AND ADMINISTRATION ----------

- Combination use in Non-Small Cell Lung Cancer and Mesothelioma: Recommended dose of ALIMTA is 500 mg/m^2 i.v. on Day 1 of each 21-day cycle in combination with cisplatin 75 mg/m^2 i.v. beginning 30 minutes after ALIMTA administration. (2.1)
- Single-Agent use in Non-Small Cell Lung Cancer: Recommended dose of ALIMTA is 500 mg/m^2 i.v. on Day 1 of each 21-day cycle. (2.2)
- Dose Reductions: Dose reductions or discontinuation may be needed based on toxicities from the preceding cycle of therapy. (2.4)

---------- DOSAGE FORMS AND STRENGTHS ----------

- 100 mg vial for injection (3)
- 500 mg vial for injection (3)

---------- CONTRAINDICATIONS ----------

History of severe hypersensitivity reaction to pemetrexed. (4)

---------- WARNINGS AND PRECAUTIONS ----------

- Premedication regimen: Instruct patients to take folic acid and vitamin B_{12}. Pretreatment with dexamethasone or equivalent reduces cutaneous reaction. (5.1)
- Bone marrow suppression: Reduce doses for subsequent cycles based on hematologic and nonhematologic toxicities. (5.2)
- Renal function: Do not administer when CrCl <45 mL/min. (2.4, 5.3)
- NSAIDs with renal insufficiency: Use caution in patients with mild to moderate renal insufficiency (CrCl 45-79 mL/min). (5.4)
- Lab monitoring: Do not begin next cycle unless ANC ≥1500 cells/mm^3, platelets ≥100,000 cells/mm^3, and CrCl ≥45 mL/min. (5.5)
- Pregnancy: Fetal harm can occur when administered to a pregnant woman. Women should be advised to use effective contraception measures to prevent pregnancy during treatment with ALIMTA. (5.6)

---------- ADVERSE REACTIONS ----------

The most common adverse reactions (incidence ≥20%) with single-agent use are fatigue, nausea, and anorexia. Additional common adverse reactions when used in combination with cisplatin include vomiting, neutropenia, leukopenia, anemia, stomatitis/pharyngitis, thrombocytopenia, and constipation. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact Eli Lilly and Company at 1-800-LillyRx (1-800-545-5979) or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

---------- DRUG INTERACTIONS ----------

- NSAIDs: Use caution with ibuprofen or other NSAIDs. (7.1)
- Nephrotoxic drugs: Concomitant use of these drugs and/or substances which are tubularly secreted may result in delayed clearance. (7.2)

See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling

Revised: 08/2010

Type: Long hand/essay

1. What is the trade name of the medication?

2. What is the generic name of the medication?

3. What illnesses is the medication used for?

4. What is the standard dose of the medication?

5. What medication should this medication be combined with?

Correct Answers:

1: Altima

2: pemetrexed disodium

3: Non-small cell lung cancer and mesothelioma

4: 500 mg/m^2 on day 1 of each 21-day cycle

5: cisplastin

Global Rationale:

Learning Outcome: 2.8 Interpret information found on drug labels and in prescribing information.

Question 37

Complete the table by filling in the shaded areas.

Type: Long hand/essay

Abbreviation	Meaning
	Before meals
q2h	
Susp	
	Teaspoon
XL or XR	

Correct Answer:

Abbreviation	Meaning
ac	Before meals
q2h	**Every two hours**
Susp	**Suspension**
t or tsp	Teaspoon
XL or XR	**Extended release**

Global Rationale

Learning Outcome: 2.4 Identify common abbreviations used in medication administration.

Question 38

Complete the table by filling in the shaded areas.

Type: Long hand/essay

Abbreviation	Meaning
	Gastrostomy tube
PO	
t.i.d. or T.I.D.	
	gram
kg	
ER	
gtt	
	capsule
	Delayed release
	Immediately

Correct Answer:

Abbreviation	Meaning
GT	Gastrostomy tube
PO	**By mouth**
t.i.d. or T.I.D.	**Three times per day**
g	gram
kg	**Kilogram**
ER	**Extended release**
gtt	**drop**
cap	capsule
DR	Delayed release
Stat	Immediately

Global Rationale:

Learning Outcome: 2.4 Identify common abbreviations used in medication administration.

Chapter

2 Safe and Accurate Drug Administration

Chapter Overview

Chapter 2 is a general introduction to the drug administration process. It introduces the student to the role of the person who administers patient medication and the various forms and routes by which medications are administered. The student will begin to develop a vocabulary of terms necessary to understand pertinent information about drugs and their administration, which will aid in understanding the responsibilities of administering drugs safely. Safety, documentation, and accuracy are stressed throughout the text. Recent *Joint Commission* recommendations are included, and the "Six Rights" of medication administration are discussed extensively. The student will learn how to interpret drug prescriptions, medication orders, medication administration records (MAR), drug labels and package inserts, and military time. The roles of the FDA and other organizations concerned with decreasing medication errors are discussed.

Instructor's Notes

- The PowerPoint slides are particularly useful in presenting the material in this chapter. Slides of drug prescriptions, medication orders, medication administration records, drug labels, and package inserts can be projected as the instructor explains their various components.
- Demonstrate actual examples of various forms of drugs (inhalers, tablets, capsules, patches, suppositories), if available.
- Students who have learned this material in other courses may review this chapter quickly.
- Discuss the abbreviations to be avoided in medication orders and documentation (the "Do Not Use List").

- Emphasize the importance of the need to be vigilant regarding drugs that "Look Alike-Sound Alike."
- The *Nurse Alert* newsletter of the Institute of Safe Medication Practice is a good reference for medication safety issues; see Appendix B.
- Interpreting a drug order is very important for the rest of the course and should be stressed.
- If the Internet is accessible in the classroom, pharmaceutical company web sites (for example, dailymed.nlm.nih.gov/) can be used to view actual labels and prescribing information for drugs.

Key Terms

automated medication dispensing cart (ADC)
A.M./P.M.
bar code
b.i.d.
body surface area (BSA)
buccal
capsule
computerized physician order entry (CPOE)
controlled substance
delayed-release (DR)
dosage strength
dry powder inhaler (DPI)
elixir
enteral
enteric-coated
epidural
extended release (XL)
Federal Drug Administration (FDA)
generic name
inhalation
Institute for Safe Medication Practice (ISMP)
intracardiac (IC)
intradermal (ID)
intramuscular (IM)
intrathecal
intravenous (IV)
local/systemic
lot number
medication administration record (MAR)
medication order
metered dose inhaler (MDI)
meters squared (m^2)
military time
national drug code (NDC)
nebulizer
oral (PO)
package insert
parenteral
pharmacist
prescriber
prescription
prn
q.i.d.
registration symbol (®)
route
safe dose range
side effect
standing order
stat
subcutaneous (subcut)
sublingual (SL)
suspension
sustained release (SR)
syrup
tablet
t.i.d.
topical
trade name
trademark (™)
transdermal
unit dose
United States Pharmacopoeia (USP)

Answers to Chapter 2 Additional Exercises

1. montelukast
2. Zocor
3. 100 mL
4. 200 mg/5 mL
5. 80 mg/20 mg per mL
6. (a) Anusol supp
   (b) 6 A.M.
   (c) 4
   (d) Bonivar, Humulin N, Humulin R
   (e) December 16
7. (a) Omnicef & Glucophage
   (b) 4
   (c) 25 mg/h, transdermal
   (d) by mouth
   (e) 2

8. (a) milnacipran HCl, tablets
   (b) fibromyalgia
   (c) 12.5 mg once
   (d) No, Savella is not approved for use in pediatrics
   (e) 200 milligrams daily

9.

Standard Time	Military Time
9:30 a.m.	0930h
2:43 p.m.	1443h
midnight	2400h
11:20 p.m.	2320h
9:48 a.m.	0948h
11:40 p.m.	2340h
8:42 p.m.	2042h
2:15 a.m.	0215h
12:02 a.m.	0002h
7:15 a.m.	0715h

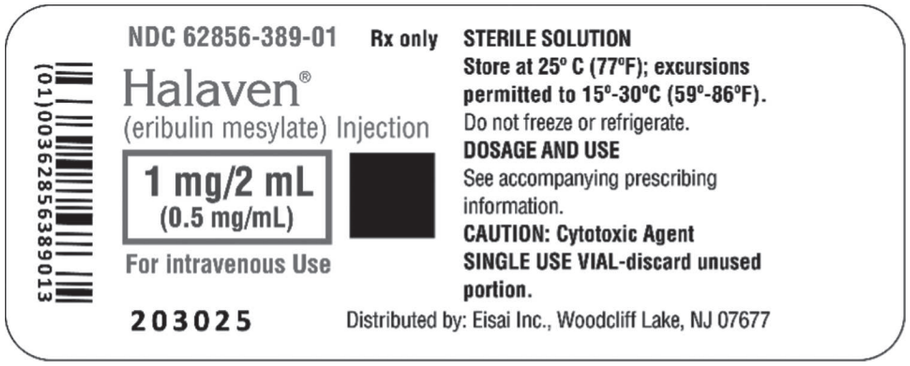
10. (a) Administer 500 mg of Glucophage (trade name) metformin (generic name) by mouth twice a day
    (b) Administer 10,000 units of heparin subcutaneously every 8 hours
    (c) Administer one-half inch of NITRO-BID 2% (trade name) nitroglycerin ointment (generic name) to chest wall every 6 hours
    (d) Administer 5 mg of Accupril (trade name) quinapril hydrochloride (generic name) by mouth once a day
    (e) Administer 650 mg of Tylenol (trade name) acetaminophen (generic name) by mouth as needed when fever is over 101 degrees

11. (a) Time and Route
    (b) Route
    (c) Time and Route
    (d) Dose and Route
    (e) Route

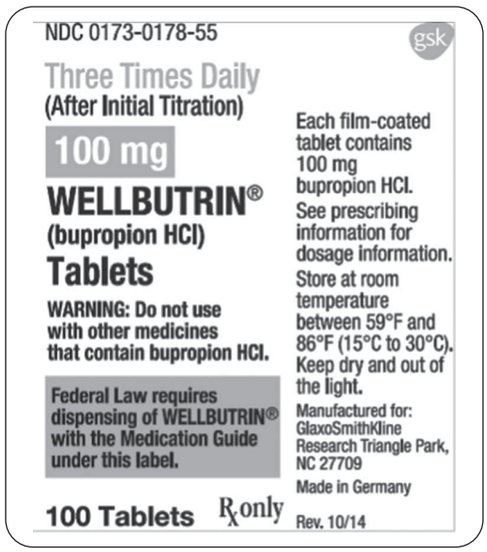
12. (a) 10 mg
    (b) 10 mg
    (c) 10 mg
    (d) 5 mg

Chapter 2 Examination Questions

Study the drug labels shown in • Figure 2.1 and supply the following information:



(a)



(b)

(c)

• **Figure 2.1**
Drug Labels for Questions 1–5.

1. What is the generic name of Halaven?
2. How many tablets are in the bupropion container?
3. What is the strength of the carboplatin?

4. What is the route of administration for eribulin mesylate?
5. What is the dosage strength for the drug whose NDC number is 0173-0178-55?

Study the portion of a MAR in • Figure 2.2 and answer questions 6–10 below.

Order	time	18	19	20	21
nifedipine 20 mg po b.i.d.	0900h	*AD*	*AD*	*AD*	*AD*
	1700h	*BK*	*BK*	*BK*	*BK*
digoxin 0.25 mg po daily	0900h	*X*	*AD*	*AD*	*AD*
sucralfate 1 g po q.i.d.	0900h	*AD*	*AD*	*AD*	*AD*
	1300h	*BK*	*BK*	*BK*	*BK*
	1700h	*BK*	*BK*	*BK*	*BK*
	2100h	WW	WW	WW	WW

• **Figure 2.2**

6. How many drugs were administered at 1 P.M. on the 18th?
7. On what date and time was the digoxin first administered?
8. What are the initials of the nurse who administered the nifedipine at 5:00 P.M. on the 20th?
9. What was the route of administration of the sucralfate?
10. How many doses of nifedipine were administered on the 19th?

Use Figure 2.3 to answer questions 11 and 12.

DECLOMYCIN®
DEMECLOCYCLINE HYDROCHLORIDE
FOR ORAL USE

Adults: Usual daily dose, four divided doses of 150 mg each or two divided doses of 300 mg each.

For children above eight years of age: Usual daily dose, 3–6 mg per pound body weight per day, depending on the severity of the disease, divided into two to four doses.

Gonorrhea patients sensitive to penicillin may be treated with demeclocycline administered as an initial oral dose of 600 mg followed by 300 mg every 12 hours for four days to a total of 3 grams.

HOW SUPPLIED
DECLOMYCIN® demeclocycline hydrochloride capsules. 150 mg are two-tone, coral colored, soft gelatin capsules, printed with LL followed by 09 on the light side in blue ink, are supplied as follows:
NOC 0005-9208-23 – Bottle of 100

• **Figure 2.3**
Portion of a package insert for questions 11–12.

11. What is the generic name of the drug?
12. What is the form of the drug?
13. Interpret the following order: *acarbose 75 mg po b.i.d.*
14. What is missing from the following order: *paroxetine 50 mg daily*
15. Order: *linezolid 600 mg po q12h*. How many mg will you administer?

For the partial orders in questions 16–20, indicate how many milliliters you would administer.

16. 60 mL daily
17. 60 mL b.i.d.
18. 60 mL t.i.d.
19. 60 mL daily in two divided doses
20. 60 mL q12h

Answers to Chapter 2 Examination Questions

1. eribulin mesylate
2. 100 tab
3. 600 mg/60 mL or 10 mg/mL
4. intravenous
5. 100 mg/tab
6. 1 (sucralfate)
7. 19th at 9:00 A.M.
8. BK
9. By mouth
10. 2
11. demeclocycline HCl
12. Capsule
13. Administer acarbose seventy-five milligrams mg by mouth two times a day
14. Route of administration
15. 600 mg
16. 60 mL
17. 60 mL
18. 60 mL
19. 30 mL
20. 60 mL