Name:_____

Date:_____

Unit 1A Test 1

1. Explain what is meant by a *logical argument*.

2. Summarize the fallacy of *personal attack*.

3. Summarize the fallacy of *false cause*.

4. Give an example of an argument that involves a *straw man*.

5. List the premise and the conclusion of the following argument:

Your mother is aging and lives alone so you need to get her one of those emergency alert services.

6. List the premise and the conclusion of the following argument:

"Avatar" is the best movie of all time! It is ranked number one worldwide.

Unit 1A Test 1 *(continued)*

Name:_____

7. For the following argument, identify one or more of the 10 fallacies described in this unit. Explain how the fallacy is involved.
Obviously it is best not to testify on your own behalf. Casey Anthony and George Zimmerman each declined to testify, and they were both found "not guilty."

8. For the following argument, identify one or more of the 10 fallacies described in this unit. Explain how the fallacy is involved.
Most people find out what's happening on social media or other internet sites so it is the most reliable source for news.

9. For the following argument, identify one or more of the 10 fallacies described in this unit. Explain how the fallacy is involved.
"Finding Bigfoot" has yet to provide evidence that bigfoots exist, so all those sightings are obviously bogus.

10. When evaluating information from media, explain the importance to *consider the source.*

Name:_____

Date:_____

Unit 1A Test 2

1. Explain what is meant by *fallacy*.

2. Summarize the fallacy of *circular reasoning*.

3. Summarize the fallacy of *appeal to ignorance*.

4. Give an example of an argument that involves a *hasty generalization*.

5. List the premise and the conclusion of the following argument:

Obviously it is best not to testify on your own behalf. Casey Anthony and George Zimmerman each declined to testify, and they were both found "not guilty."

6. List the premise and the conclusion of the following argument:

Kate is such a horrible dresser. I really don't think she should be the head of the PTA.

Unit 1A Test 2 *(continued)*

Name:_____

7. For the following argument, identify one or more of the 10 fallacies described in this unit. Explain how the fallacy is involved.
A poster which reads "Support the Humane Society", shown with pictures of small dogs and cats in cages.

8. For the following argument, identify one or more of the 10 fallacies described in this unit. Explain how the fallacy is involved.
None of those haunted places shown ever show proof positive that ghosts exist, so obviously they do not.

9. For the following argument, identify one or more of the 10 fallacies described in this unit. Explain how the fallacy is involved.
The president of that university is campaigning for funds to build a new stadium. He doesn't care about academics.

10. When evaluating information from media, explain the importance to *Check the date.*

Name:_____

Unit 1A Test 3

Date:_____

Choose the correct answer to each problem.

1. Which of the following is the study of the methods and principles of reasoning?

(a) Fallacy **(b)** Premise **(c)** Logic **(d)** Argument

2. Which of the following describes an argument based on the idea that if you have a few cases, you can draw a conclusion?

(a) Hasty generalization **(b)** Limited choice **(c)** False cause **(d)** Appeal to ignorance

3. Which of the following describes an argument based on the idea that since something is desired or chosen by a majority of the people, it must be true or desirable?

(a) Circular reasoning
(b) Appeal to ignorance
(c) Appeal to popularity
(d) Appeal to emotion

4. Which of the following describes an argument based on the idea that since something has not been proved to be false, it must therefore be true?

(a) Hasty generalization
(b) Appeal to ignorance
(c) Diversion (red herring)
(d) Straw man

5. Which argument involves an appeal to emotion?

(a) Buy this television—it's the most popular brand!
(b) Three dentists on Main Street recommend SuperWhite Toothpaste. Therefore, all dentists prefer SuperWhite.
(c) If you didn't have Wheatie O's for breakfast, then you must have had granola.
(d) A television commercial for a board game features healthy, happy people enjoying the game.

6. Identify the conclusion of the following argument: *Steve bought a new car, and then he got into a traffic accident. Buying the new car must have caused the accident.*

(a) Steve bought a new car.
(b) Then he got into a traffic accident.
(c) Buying the new car must have caused the accident.
(d) None of the above

7. Which argument involves circular reasoning?

(a) You'd better get there on time, since otherwise you'll be late.
(b) Since America's Founding Fathers were in favor of free speech, they would certainly have opposed any ban of pornography.
(c) Since most people are in favor of the bill, it must certainly be a good law.
(d) There is no evidence that this product causes heart attacks. Therefore, it is perfectly safe.

Unit 1A Test 3 *(continued)*

Name:_____

8. *When confronted with questions from the press about alleged political scandals, a congress woman replies that the allegations against her should be ignored since her accuser is part of a vast right-wing conspiracy*.
This argument is an example of which of the following fallacies?

(a) Appeal to popularity
(b) Circular reasoning
(c) Personal attack
(d) Limited choice

9. *A senatorial candidate favors eliminating affirmative action programs. His opponent writes that "The other candidate doesn't think there's anything wrong with discriminatory hiring practices.*"
This argument is an example of which of the following fallacies?

(a) Hasty generalization
(b) Limited choice
(c) False cause
(d) Straw man

10. Going onto the internet to check information delivered in the media is an example of which step in Evaluating Media Information?

(a) Watch for hidden agenda
(b) Consider the source
(c) Don't miss the big picture
(d) Validate accuracy

Name:_____

Unit 1A Test 4

Date:_____

Choose the correct answer to each problem.

1. The use of a set of facts to support a conclusion is called:

(a) Logic
(b) Argument
(c) Circular reasoning
(d) Fallacy

2. Which of the following describes an argument based on the idea that since many people believe something is true, it must be true?

(a) Appeal to ignorance
(b) False cause
(c) Straw man
(d) Appeal to popularity

3. Which of the following describes a conclusion which is drawn from an inadequate number of cases or cases that have not been sufficiently analyzed?

(a) Appeal to ignorance
(b) Hasty generalization
(c) Diversion (red herring)
(d) Circular reasoning

4. Which argument involves an appeal to ignorance?

(a) Since Paul is not at work, he must be at the hardware store.
(b) Four eye doctors in town all recommend Krystal Kleer contact lenses. Therefore, all eye doctors recommend Krystal Kleer contact lenses.
(c) We have never been able to communicate with beings from another planet. Therefore, the earth is the only planet with intelligent life.
(d) Buy this stereo system—it's the most popular brand!

5. Which argument involves a personal attack (ad hominem)?

(a) Dad: "If you want to do well in life, you should do well in school."
Son: "Oh yeah? Well, Mom tells me your grades weren't very good either."
(b) A driver tells a policeman, "You can't give me a ticket. I've never gotten a ticket!"
(c) We must raise taxes because of the children. Children are our most important resource, and we must do everything that we can to give them a brighter future.
(d) If Proposition S is passed, there will be more pollution.

6. Identify the conclusion of the following argument: *Roberta washed her car, and then it started to rain. Washing her car must have caused the rain to fall.*

(a) Roberta washed her car.
(b) Then it started to rain.
(c) Washing her car must have caused the rain to fall.
(d) None of the above

Unit 1A Test 4 *(continued)*

Name:_____

7. *My political opponent would like to loosen the town's sign rules. He wants to make our beautiful town trashy looking!*
This argument is an example of which of the following fallacies?

(a) False cause
(b) Hasty generalization
(c) Straw man
(d) Diversion (red herring)

8. *A television commercial shows two senior citizens enjoying rock climbing and scuba diving and then drinking a certain kind of vitamin drink.*
This is an example of which of the following fallacies?

(a) Hasty generalization **(b)** Appeal to ignorance **(c)** Limited choice **(d)** Appeal to emotion

9. *We must limit immigration to the United States in order to sustain the prosperous economy. A strong economy is vital to the health and wealth of the American people and the future of our children.*
This argument is an example of which of the following fallacies?

(a) False cause
(b) Diversion (red herring)
(c) Straw man
(d) Appeal to force

10. The instruction to stand back and think about whether information delivered in the media makes sense is an example of which step in Evaluating Media Information?

(a) Watch for hidden agenda
(b) Consider the source
(c) Don't miss the big picture
(d) Validate accuracy

Name:_____

Date:_____

Unit 1B Test 1

1. Explain what is meant by a *proposition*.

2. If you put the following in "If *p*, then *q*" form, what would *q* be?
You have to study if you want to pass the test.

3. Write the negation: *Marvin is the oldest child*.

4. State *p* and *q*, and give the truth values of each. Then state whether the entire proposition is true or false.
8 + 4 = 12 and 12 × 3 = 36

5. Does the following use an inclusive or exclusive "*or*"? Explain.
I'm going to the movies or to a party Friday night.

6. State *p* and *q*, and give the truth values of each. Then state whether the entire proposition is true or false.
6 + 3 = 9 or 9 × 3 = 18

Unit 1B Test 1 *(continued)*

Name:_____

7. What is the inverse of the contrapositive of *if p, then not q*.

8. Let *p* be true and let *q* be true. What does *r* have to be in order for the proposition *if p, then (q and not r)* to be false?

9. Make a truth table for the statement *if not p, then q*.

10. Make a truth table for (*not p) and q.*

Name:_____

Date:_____

Unit 1B Test 2

1. Explain what is meant by *negation*.

2. If you put the following in "If p, then q" form, what would q be**?**
You need to order now if it is going to be delivered on time.

3. Write the negation: *Lily got the highest grade on the test.*

4. State p and q, and give the truth values of each. Then state whether the entire proposition is true or false.
$8 + 4 = 12$ *and* $13 \times 3 = 39$

5. Does the following use an inclusive or exclusive "*or*"? Explain.
The insurance policy will cover damage to the car from weather or accidents.

6. State p and q, and give the truth values of each. Then state whether the entire proposition is true or false.
$7 + 5 = 12$ *or* $12 + 5 = 17$

Unit 1B Test 2 *(continued)*

Name:_____

7. What is the converse of the contrapositive of *if not p, then q*?

8. Let *p* be true and let *r* be false. What does *q* have to be in order for the proposition *if p and not q, then r* to be false?

9. Make a truth table for the statement *if not p, then not q.*

10. Make a truth table for *p and (not q).*

Name:_____

Date:_____

Unit 1B Test 3

Choose the correct answer to each problem.

1. Which of the following is a proposition?

(a) The boy with the brown eyes.
(b) What is your IQ?
(c) Toads can sing opera.
(d) 15 – 12

2. *Emily scored highest on the test.*
Which of the following is the negation of this proposition?

(a) Jason scored highest on the test.
(b) Emily scored lowest on the test.
(c) Emily did not score highest on the test.
(d) Emily did not score lowest on the test.

3. Which of the following most likely demonstrates an inclusive *"or"?*

(a) I should wear a sweater or a jacket.
(b) Soup or salad is included in the price of the entrée.
(c) On vacation, I like to go to the beach or to the mountains.
(d) I need to spend less or make more money.

4. If p is true, q is true, and r is false, which of the following is false?

(a) (p *and* q) *or not* r **(b)** p *and* (q *or not* r) **(c)** (p *or* q) *and* r **(d)** p *or* (q *and* r)

5. If p is false, q is true, and r is false, which of the following is true?

(a) *If not p, then (q and r).*
(b) *(If p, then q) and r.*
(c) *If not p, then (q or r).*
(d) *If q, then (p and r).*

6. Determine the truth values of the hypothesis and the conclusion in the following statements. Which statement is false?

(a) If poodles are cats, then poodles can purr.
(b) If ostriches are birds, then ostriches can fly.
(c) If dolphins are fish, then dolphins live in the water.
(d) If ostriches are birds, then ostriches have feathers.

7. Use truth tables to determine which statement is logically equivalent to *if p, then q.*

(a) *p and not q* **(b)** (*not p*) *and q* **(c)** (*not p*) *or q* **(d)** *p or not q*

8. *If wishes were horses, then beggars could ride.*
Which of the following is the inverse of this statement?

(a) If beggars can't ride, then wishes aren't horses.
(b) If wishes aren't horses, then beggars can't ride.
(c) If beggars can't ride, then wishes are horses.
(d) If wishes aren't horses, then beggars can ride.

Unit 1B Test 3 *(continued)*

Name:_____

9. Which of the following is logically equivalent to any conditional?

(a) Inverse
(b) Converse
(c) Contrapositive
(d) Negation

10. You are searching for the book *The Old Man and the Sea* by Ernest Hemingway. Which of the following key word search combinations would **not** have your book on its search list?

(a) (Man or Sea) and Hemingway
(b) (Man and Sea) or (Hemingway and Steinbeck)
(c) (Man or Sea) and (Hemingway or Steinbeck)
(d) Man and (Hemingway and Steinbeck)

Name:_____

Unit 1B Test 4

Date:_____

Choose the correct answer to each problem.

1. Which of the following is a proposition?

(a) 7 + 3 – 5
(b) Bring me a glass of tea.
(c) Alison lives here?
(d) Louie likes lobster less than Leslie.

2. *Susie came in first in the race.*
Which of the following is the negation of this proposition?

(a) Billy came in first in the race.
(b) Susie came in second in the race.
(c) Susie did not come in first in the race.
(d) Susie came in last in the race.

3. *Jane will not vote for a candidate who opposes a ban on hand guns.*
Assuming this statement is true, which of the following is false?

(a) Jane supports a ban on hand guns.
(b) Jane may vote for a candidate who does not own a hand gun.
(c) Jane might vote for Senator Jones who supports a ban on hand guns.
(d) If Senator Jones opposes a ban on hand guns, then Jane will vote for her.

4. If p is false, q is false, and r is true, which of the following is true?

(a) (*p and q*) *and r* **(b)** (*not p*) and (*q or r*) **(c)** (*p and not q*) *or* not *r* **(d)** *p and* (*q or r*)

5. If p is true, q is true, and r is false, which of the following is false?

(a) *If not p, then (q and r).*
(b) *If p, then (q and r).*
(c) *If not p, then (q or r).*
(d) *If p, then (q or not r).*

6. Determine the truth values of the hypothesis and the conclusion in the following statements. Which statement is false?

(a) If California is on the west coast, then Colorado is on the east coast.
(b) If Colorado is on the east coast, then California is on the west coast.
(c) If Colorado is on the east coast, then New York is on the west coast.
(d) If California is on the west coast, then New York is on the east coast.

7. Use truth tables to determine which statement is logically equivalent to *if not p, then not q*.

(a) *p and not q* **(b)** (*not p*) *and q* **(c)** (*not p*) *or q* **(d)** *p or not q*

8. *If I don't get a job soon, then I will lose my car.*
Which of the following is the inverse of this statement?

(a) If I lose my car, then I won't get a job soon.
(b) If I get a job soon, then I can keep my car.
(c) If I can keep my car, then I'll get a job soon.
(d) If I can keep my car, then I won't get a job soon.

Unit 1B Test 4 *(continued)*

Name:_____

9. Which of the following is logically equivalent to any conditional?

(a) Inverse
(b) Contrapositive
(c) Negation
(d) Converse

10. You are searching for the book *Little Women* by Louisa May Alcott. Which of the following key word search combinations would **not** have your book on its search list?

(a) (Little and Women) and Alcott
(b) Women and (Alcott and Bronte)
(c) (Little or Women) and (Alcott or Bronte)
(d) (Little and Women) or (Alcott and Bronte)

Name:_____

Unit 1C Test 1

Date:_____

1. Use set notation to write the members of the following set: *Days of the week*.

_____

_____

_____

2. Draw a Venn Diagram to illustrate a categorical proposition. Label each part of the diagram clearly.

3. Draw a Venn Diagram to illustrate two *disjoint* sets. Label each part of the diagram clearly.

4. Draw a Venn Diagram to illustrate: *Some redheads are movie stars*. Label each part of the diagram clearly.

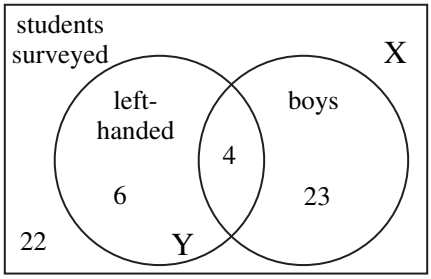
5. Draw a Venn Diagram to illustrate the relationship between *water* and *rocks*. Label each part of the diagram clearly.

6. Suppose that A represents the set of all cars and B represents the set of all vehicles. Draw a Venn diagram showing the relationship between these two sets.

Unit 1C Test 1 *(continued)*

Name:_____

7. In the Venn diagram below, what does the region with an X in it tell us? Be specific.



_____

_____

_____

8. In the Venn diagram above, what does the region with a Y in it tell us? Be specific.

_____

_____

_____

9. In a survey of 40 musicians, it was found that 20 people played the piano, 25 played the guitar, and 7 played both instruments. Draw a Venn diagram to represent this situation. Label each part of the diagram clearly.

10. In a class of 30 students, 18 were history majors, 12 were science majors, and 7 were dual history and science majors. Draw a Venn Diagram to represent this situation. Label each part of the diagram clearly.

Name:_____

Unit 1C Test 2

Date:_____

1. Use set notation to write the members of the following set: *Even integers between -9 and 9*.

2. Give an example of a subset of the natural numbers.

3. Draw a Venn Diagram to illustrate *overlapping* sets. Label each part of the diagram clearly.

4. Draw a Venn Diagram to illustrate *disjoint* sets. Label each part of the diagram clearly.

5. Draw a Venn Diagram to illustrate *All German Shepherds are dogs*. Label each part of the diagram clearly.

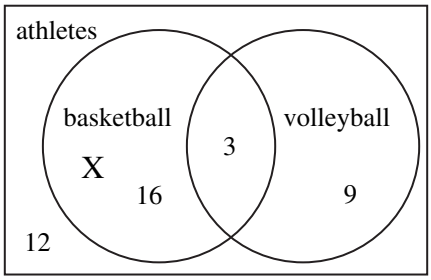
6. For the categorical proposition, *All roses are fragrant*. Write the subject and predicate sets.

Unit 1C Test 2 *(continued)*

Name:_____

7. Suppose that A represents the set of all Fords and B represents the set of all SUVs. Draw a Venn diagram showing the relationship between these sets.

8. In the Venn diagram below, what does the region with an X in it tell us? Be specific.



9. In a veterinary waiting room, there were a total of 16 individuals, 8 of whom brought dogs, 5 brought cats, and three brought both dogs and cats.
Draw a Venn diagram to represent this situation. Label each part of the diagram clearly.

10. In a freshman class of 50 students, 30 students are taking math, 24 students are taking history, and 15 students are taking both math and history.
Draw a Venn diagram to represent this situation. Label each part of the diagram clearly.

Name:_____

Unit 1C Test 3

Date:_____

1. Which of the following sets of numbers does **not** include 0 as a member?

(a) Rational numbers
(b) Whole numbers
(c) Natural numbers
(d) Real numbers

2. Which of the following sets are disjoint?

(a) Aunts and uncles
(b) Men and uncles
(c) Women and aunts
(d) They are all disjoint

3. Which of the following sets are **not** disjoint?

(a) Mothers and sons
(b) Mothers and fathers
(c) Fathers and daughters
(d) Mothers and daughters

4. In a Venn diagram, if the circle for set A does not overlap the circle for set B,

(a) some A are B
(b) no A are B
(c) all A are B
(d) all B are A

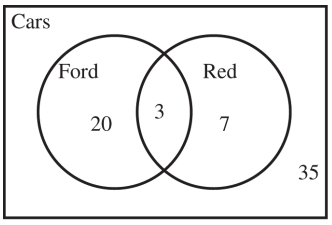
5. In a Venn diagram, if the circle for set A is entirely inside the circle for set B,

(a) some A are B
(b) no A are B
(c) all A are B
(d) all B are A

6. In a Venn diagram, overlapping circles indicate

(a) Sets that potentially share common members
(b) Disjoint sets
(c) Sets of numbers
(d) Subsets

Use this Venn diagram, which describes the cars on a used car lot, to answer questions 7 and 8.



7. How many Red Fords are on the lot?

(a) 10
(b) 23
(c) 77
(d) 3

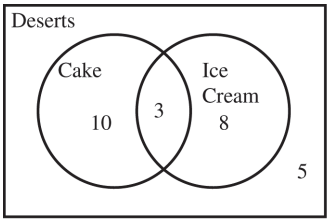
8. How many cars on the lot are neither a Ford nor red?

(a) 5
(b) 3
(c) 20
(d) 35

Unit 1C Test 3 *(continued)*

Name:_____

Use this Venn diagram, which describes the desserts people ordered at a party, to answer questions 9 and 10.



9. How many people ordered ice cream?

(a) 8 **(b)** 11 **(c)** 10 **(d)** 13

10. How many people ordered cake but not ice cream?

(a) 8 **(b)** 11 **(c)** 10 **(d)** 13

Name:_____

Unit 1C Test 4

Date:_____

1. Which of the following sets are overlapping?

(a) Dogs and cats
(b) Cats and birds
(c) Pets and dogs
(d) Birds and fish

2. Which of the following sets of numbers does **not** include negative numbers?

(a) Integers
(b) Real numbers
(c) Whole numbers
(d) Rational numbers

3. Which of the following sets are **not** disjoint?

(a) Cloudy days and holidays
(b) Brothers and sisters
(c) Fords and Chevrolets
(d) Democrats and Republicans

Use the information below to answer questions 4 and 5.

Students living off-campus were asked about the electronic products they own: VCRs, DVD and MP-3 players.

The table below shows the number of students and the types of products they own.

Player	Number	Player	Number
VCR only	4	VCR and MP-3 only	2
DVD only	16	DVD and MP-3 only	10
MP-3 only	8	All 3	15
VCR and DVD only	9	None	6

4. How many own a DVD or MP-3 player, but not a VCR?

(a) 16
(b) 25
(c) 10
(d) 34

5. How many own a DVD player but not an MP-3 player?

(a) 16
(b) 6
(c) 25
(d) 39

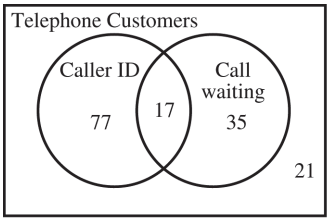
6. In a Venn diagram, a circle drawn inside another circle represents

(a) Sets of numbers
(b) A subset
(c) Overlapping sets
(d) Disjoint sets

Unit 1C Test 4 *(continued)*

Name:_____

Use this Venn diagram, which describes the optional features ordered by new telephone customers in one day, to answer questions 7 and 8.



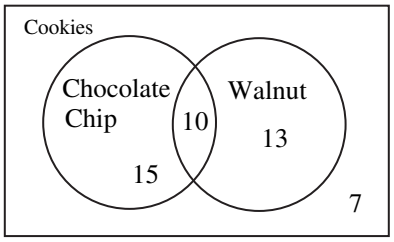
7. How many customers did not order call waiting?

(a) 77 **(b)** 35 **(c)** 52 **(d)** 98

8. How many customers ordered caller ID?

(a) 17 **(b)** 77 **(c)** 94 **(d)** 98

Use this Venn diagram, which describes the types of cookies in a bakery, to answer questions 9 and 10.



9. How many cookies have neither chocolate chips nor walnuts in them?

(a) 7 **(b)** 13 **(c)** 10 **(d)** 15

10. How many chocolate chip cookies have walnuts?

(a) 10 **(b)** 7 **(c)** 17 **(d)** 3

Name:_____

Date:_____

Unit 1D Test 1

1. Explain what is meant by a *valid* argument.

2. Explain what is meant by an *inductive* argument.

3. Give an example of a *deductive* argument.

4. For the following argument, state the truth of each premise and the truth of the conclusion.
All birds lay eggs.
Frogs lay eggs.
Frogs are birds.

5. Does the following argument affirm or deny the hypothesis or conclusion? Is the argument valid?
If I stay home from work, I am sick.
I did not stay home from work today.
I am not sick.

Unit 1D Test 1 *(continued)*

Name:_____

6. What can be deduced from the following argument?
If Amy studies for the test, she will pass it.
If Amy passes the test, she has a good chance of passing the course.

7. *Most girls like to color.*
Emily is a girl.
Emily might like to color.
Use a Venn diagram to determine the validity of this argument.

8. *Some animals are cold-blooded.*
My dog is an animal.
My dog is cold-blooded.
Use a Venn diagram to determine the validity of this argument.

9. Illustrate "*the sum of two odd numbers is an even number*" by stating four examples. Is this inductive or deductive reasoning?

10. Give an example that invalidates the mathematical rule "*the difference of two negative numbers is always a negative number*."

Name:_____

Date:_____

Unit 1D Test 2

1. Explain what is meant by a *sound* argument.

2. Explain what is meant by a *deductive* argument.

3. Give an example of an *inductive* argument.

4. For the following argument, state the truth of each premise and the truth of the conclusion.
All mammals have live births.
Some snakes have live births.
Some snakes are mammals.

5. Does the following argument affirm or deny the hypothesis or conclusion? Is the argument valid?
If I am sick, I stay home from work.
I stayed home from work today.
I am sick.

Unit 1D Test 2 *(continued)*

Name:_____

6. What can be deduced from the following argument?
If Aaron goes to bed early, he will get up early.
If Aaron gets up early, he should not be late for his appointment.

7. *All horses are green.*
Trigger is a horse.
Trigger is green.
Use a Venn diagram to determine the validity of this argument.

8. *Everyone who drives faster than the speed limit is breaking the law.*
Gary is breaking the law.
Gary is driving faster than the speed limit.
Use a Venn diagram to determine the validity of this argument.

9. Illustrate "*six times any number is an even number*" by stating four examples. Is this inductive or deductive reasoning?

10. Give an example that invalidates the following mathematical rule $a(b + c) = ab + c$

Name:_____

Unit 1D Test 3

Date:_____

Choose the correct answer to each problem.

1. Which of the following is a valid argument?

(a) All cars have engines.
Mustangs are cars.
Mustangs have engines.

(b) All airplanes have engines.
747s have engines.
747s are airplanes.

(c) All Mustangs have engines.
All Corvettes have engines.
All Ferraris have engines.
All cars have engines.

(d) Some cars have sun roofs.
Liza's Honda does not have a sunroof.
Liza's Honda is not a car.

2. Which of the following is a sound argument?

(a) All birds can fly.
Eagles are birds.
Eagles can fly.

(b) All birds have wings.
Ducks are birds.
Ducks have wings.

(c) Eagles have feathers.
Sparrows have feathers.
Ducks have feathers.
All birds have feathers.

(d) Some birds have feathers.
Sparrows are birds.
Sparrows have feathers.

3. *If the congressman is lying, then no one will vote for him.*
If no one votes for the congressman, then he will not win the election.
What can be deduced from these premises?

(a) The congressman is lying.
(b) The congressman will not win the election.
(c) If the congressman does not win the election, then he was lying.
(d) If the congressman is lying, then he will not win the election.

4. *If I love a television show, it gets cancelled.*
I didn't love that show.
That show won't get cancelled.
This invalid argument is an example of which of the following?

(a) Affirming the hypothesis
(b) Denying the hypothesis
(c) Affirming the conclusion
(d) Denying the conclusion

5. *Some lakes always freeze in the winter.*
Lake Tahoe does not always freeze in the winter.
What can be deduced from these premises? Use a Venn diagram to test your answer.

(a) Lake Tahoe is not a lake.

(b) Lake Tahoe sometimes freezes in the winter.

(c) Nothing can be deduced.

(d) Some lakes do not always freeze in the winter.

Unit 1D Test 3 *(continued)*

Name:_____

6. *Every musician owns a guitar.*
Johnny Bravo owns a guitar.
Johnny Bravo is a musician.
Which of the following describes this argument?

(a) Valid and sound
(b) Valid and not sound
(c) Not valid and sound
(d) Not valid and not sound

7. *If you were born after 1900, you were not in the Civil War.*
U.S. Grant was in the Civil War.
U.S. Grant was not born after 1900.
Which of the following describes this argument?

(a) Valid and sound
(b) Valid and not sound
(c) Not valid and sound
(d) Not valid and not sound

8. Use inductive reasoning to test the following mathematical rules.
Which statement do you think is true?

(a) $-1 \times a < 0$
(b) $-1 \times a = -a$
(c) $-1 \times a < a$
(d) $-1 \times a > a$

9. Which of the following is an example of inductive logic?

(a) If I got an A in my last four math classes then I will get an A in this math class.
(b) If I get an A on every test, then I will get an A in the class.
(c) If I study very hard then I will get an A.
(d) If I get an A in my math class then I will take another math class next year.

10. Which of the following is an example of deductive logic?

(a) Ashley has blonde hair and blue eyes so blondes must have blue eyes.
(b) Malcolm has red hair and green eyes. Most red heads have green eyes.
(c) Malcolm has had vanilla yogurt every day for three days. So, he will have vanilla yogurt tomorrow.
(d) All blondes have blue eyes and Ashley is a blonde so Ashley has blue eyes.

Name:_____

Unit 1D Test 4

Date:_____

Choose the correct answer to each problem.

1. Which of the following is a valid argument?

(a) Bank robbers are in jail.
Burglars are in jail.
Extortionists are in jail.
All criminals are in jail.

(b) Some criminals go to jail.
Burglars go to jail.
Burglars are criminals.

(c) All burglars are in jail.
Ernie is a burglar.
Ernie is in jail.

(d) Some bank robbers are in jail.
Burt is a bank robber.
Burt is in jail.

2. Which of the following is a sound argument?

(a) All fruit grow on trees.
Money doesn't grow on trees.
Money is not a fruit.

(b) Some trees have fruit.
Peaches are fruit.
Peaches grow on trees.

(c) Peach trees have fruit.
Apple trees have fruit.
Cherry trees have fruit.
All trees have fruit.

(d) Apples grow on trees.
Apples are fruit.
Some fruit grow on trees.

3. *If Lori is sick then Tony will drive.*
If Tony drives then Susan will not go.
What can be deduced from these premises?

(a) Susan will not go.
(b) Lori is sick.
(c) If Lori is sick then Susan will not go.
(d) If Susan does not go, then Lori is sick.

4. *If a man is married, then he is happy.*
Tom is married.
Tom is happy.
This valid argument is an example of which of the following?

(a) Affirming the hypothesis
(b) Denying the hypothesis
(c) Affirming the conclusion
(d) Denying the conclusion

5. *Some dogs bite.*
Chihuahuas are dogs.
What can be deduced from these premises? Use a Venn diagram to test your answer.

(a) Some dogs do not bite.
(b) Some Chihuahuas bite.
(c) Nothing can be deduced.
(d) Some dogs are Chihuahuas.

6. *Some monsters live under my bed.*
Cookie Monster lives on Sesame Street.
Some monsters do not live under my bed.
Which of the following describes this argument?

(a) Valid and sound
(b) Valid and not sound
(c) Not valid and sound
(d) Not valid and not sound

Unit 1D Test 4 *(continued)*

Name:_____

7. *All cats have four legs.*
Some cats are black.
Some four-legged animals are black.
Which of the following describes this argument?

(a) Valid and sound
(b) Valid and not sound
(c) Not valid and sound
(d) Not valid and not sound

8. Use inductive reasoning to test the following mathematical rules.
Which statement do you think is true?

(a) $0 - a = a$
(b) $0 - (-a) = a$
(c) $a - 0 = -a$
(d) $-a - 0 = a$

9. Which of the following is an example of inductive logic?

(a) If there is an accident on the freeway then we will be late for the play.
(b) If you lost the last two tennis matches, you will likely lose the next one too.
(c) I have to leave work earlier if the bank closes at 5:00 today.
(d) If I get a raise next week then I can buy a new car.

10. Which of the following is an example of deductive logic?

(a) I like Chinese food so I should like all Asian cuisine.
(b) I like all Asian cuisine so I should like Chinese food.
(c) Henrietta has been late every day this past week and she will probably always be late.
(d) Henrietta doesn't like spicy food and neither do I.

Name:_____

Unit 1E Test 1

Date:_____

1. *I decided not to put off canceling my cable subscription.* Do I still have cable? Explain.

2. *I want to find the best airfare to Phoenix because my sister is getting married there next month and I want to fly to the wedding.* State the conclusion of this argument.

3. *Buying a new lawn mower would save me time and money.* List two hidden assumptions.

4. *Andy decided to buy two State Fair tickets online for $6 each plus a $3 handling fee rather than pay $8 per ticket at the gate.* Does this statement make sense or not make sense? Explain your reasoning.

5. A basic yearly cellular telephone service contract is advertised as costing only $24 per month. However, there is a $15 per unused month penalty if you cancel the contract before the end of the year. Calculate the total cost of the service if you cancel at the end of three months.

6. *All bills should be paid on time because a bad credit report will make it difficult to get a loan.* Identify any hidden assumptions in this argument.

Unit 1E Test 1 *(continued)*

Name:_____

7. In planning a trip to Scotland, nine months in advance, you find that an airline offers two options. Plan A: You can buy a fully refundable ticket for $1900. Plan B: You can buy a $1000 ticket, but you forfeit $250 if the ticket is changed or cancelled. Describe your options and how you would decide which ticket to buy.

Use the following IRS information to answer questions 8 – 10.

According to the IRS, a single person under age 65 (and not blind) must file a tax return if any of the following apply (numbers were for tax year 2012):

(i) unearned income was more than $950

(ii) earned income was more than $5950

(iii) gross income was more than the larger of $950 or your earned income (up to $5650) plus $300

8. Sidney is 24, has unearned income of $650, earned income of $2400, and gross income of $3050. Assuming that Sidney is single and not blind, does Sidney need to file a return? Explain.

9. Wally is 17 and has earned income of $1750, unearned income of $200, and gross income of $2000. Assuming Wally is single and not blind, does Wally need to file a return? Explain.

10. Inga is 47 and has earned and gross income of $7560 and no unearned income. Assuming Inga is single and not blind, does Inga need to file a return? Explain.

Name:_____

Unit 1E Test 2

Date:_____

1. Consider the following ballot question:
Shall there be an amendment to the state constitution to prohibit the state legislature from adopting any law which inhibits the freedom of religious expression? Explain the meaning of a *no* vote.

_____

_____

_____

2. *The stores at the mall should stay open later this month. After all, it is the holiday season and there are more shoppers.* State the conclusion of this argument.

_____

_____

_____

3. *A dictator of a foreign country has enacted a ban on all firearms, citing accidental deaths among children as his main concern.* Identify other issues that might be involved in his decision to ban firearms.

_____

_____

_____

4. *Andy decided to buy four State Fair tickets on-line for $6 each plus a $3 handling fee rather than pay $8 per ticket at the gate.* Does this statement make sense or not make sense? Explain your reasoning.

_____

_____

_____

5. You can purchase the 48-load Tide laundry detergent bottle that is on sale for $6.50 or the 64-load bottle for $15.49. Which is the better option?

_____

_____

_____

Unit 1E Test 2 *(continued)*

Name:_____

6. *Swimming is healthy because it improves your cardiovascular system.* Identify any hidden assumptions in this argument.

7. In planning a trip to Greece, nine months in advance, you find that an airline offers two options. Plan A: You can buy a fully refundable ticket for $2100. Plan B: You can buy a $1600 ticket, but you forfeit $250 if the ticket is changed or cancelled. Describe your options and how you would decide which ticket to buy.

Use the following IRS information to answer questions 8 – 10.

According to the IRS, a single person under age 65 (and not blind) must file a tax return if any of the following apply (numbers were for tax year 2012):

(i) unearned income was more than $950

(ii) earned income was more than $5950

(iii) gross income was more than the larger of $950 or your earned income (up to $5650) plus $300

8. Sidney is 24, has unearned income of $650, no earned income, and gross income of $850. Assuming Sidney is single and not blind, does Sidney need to file a return? Explain.

9. Wally is 17 and has earned income of $1750 and unearned income of $200, and gross income of $1950. Assuming Wally is single and not blind, does Wally need to file a return? Explain.

Unit 1E Test 2 *(continued)*

Name:_____

10. Inga is 47 and has earned and gross income of $7560 and no unearned income. Assuming Inga is single and not blind, does Inga need to file a return? Explain.

_____

_____

_____

Name:_____

Unit 1E Test 3

Date:_____

Choose the correct answer to each problem.

1. Which of the following are stated explicitly in an argument?

(a) Hidden assumptions
(b) Missing information
(c) Valid premises
(d) Other possible conclusions

2. *Since Jerry's birthday is coming up, I should buy him a basketball as a gift.*
Which of the following conclusions can be deduced from this argument?

(a) Jerry plays basketball every Saturday.
(b) Jerry wants a basketball.
(c) Jerry bought me a birthday present last year.
(d) Jerry's birthday is next week.

3. *Neptunes are the most comfortable car on the road because they have the most elaborate suspension system.*
Which of the following hidden assumptions is being used in this argument?

(a) Other cars on the road are not comfortable.
(b) If you are going to buy a new car, then you should buy a Neptune.
(c) The suspension system is the most important factor in determining car comfort.
(d) The suspension system on the Neptune is better than on any other car.

4. *We get two weeks of vacation this year. We are going camping for one week and skiing for one week, so we will have to visit Aunt Martha next year.*
Which of the following propositions is the conclusion of this argument?

(a) We get two weeks of vacation this year.
(b) We are going camping for one week and skiing for one week this year.
(c) We will have to visit Aunt Martha next year.
(d) We need more vacation time this year.

5. *We should all drink 8 glasses of water a day because being properly hydrated will improve our health.*
Which of the following propositions is the conclusion of this argument?

(a) Drinking 8 glasses of water per day will keep us properly hydrated.
(b) We should all be properly hydrated.
(c) We should all drink 8 glasses of water per day.
(d) Drinking 8 glasses of water per day will improve our health.

6. You are leasing a summer home for twelve weeks and need to cut the grass every week. If you do it yourself you can buy a new power mower for $340 and sell it at the end of the summer for $100. Or you can rent a power mower for $20 each day. The third option is to hire a neighbor's son will charge you $9 per hour for the 2 hours that it takes to mow the grass each time using his own equipment. Which is the least expensive option?

(a) Buy a new mower.
(b) Rent a mower.
(c) Hire the neighbor's son.
(d) They all cost the same.

7. To help make a complex argument clear, visual aids may include all **except** which of the following?

(a) Written descriptions
(b) Venn diagrams
(c) Graphs
(d) Flow charts

Unit 1E Test 3 *(continued)*

Name:_____

8. A box of 20 Crunchy Munchy cookies costs $2.50 and a box of 40 Crunchy Munchy cookies costs $4.00. One quart of milk costs $1.50. Which of the following is a better bargain?

(a) A box of 20 cookies that comes with a free quart of milk
(b) A box of 40 cookies with a quart of milk that costs $1.50
(c) The cost of each option is the same

9. Two friends are planning a vacation. It will cost $100 *each way* for each of them to fly to San Francisco or $400 *round trip* for each of them to fly to New York. If they fly to San Francisco they will also have to pay $125 a night for a hotel. If they fly to New York, they can stay with friends for free. Which of the following situations would make flying to New York the better option?

(a) They want to stay for two days
(b) They want to stay for four or more days
(c) It will cost more to eat in San Francisco
(d) It will cost more to rent a car in New York

10. Betty has to go to New Orleans for business. If she flies there and back on the same day her round trip airfare will cost $510. If she stays overnight, her roundtrip airfare will cost $300, her hotel will cost $130, and three extra meals will cost $80.
Which is the less expensive option?

(a) Staying overnight in New Orleans
(b) Flying there and back on the same day
(c) The cost of each option is the same

Name:_____

Unit 1E Test 4

Date:_____

Choose the correct answer to each problem.

1. Alice needs to compute the average of her exam scores. She has already received scores of 60, 70, and 80 and has one more exam to take. Which of the following is not missing information?

(a) Grading scale
(b) Number of exams to be averaged
(c) Weight of each exam
(d) Score on the last exam

2. *Edith is taking her cat, Pico, to the vet next week because Pico is due for a vaccination. Cats should be vaccinated every year.*
Which of the following conclusions can be deduced from this argument?

(a) Pico is due for a tetanus shot.
(b) Pico wants to be vaccinated.
(c) Edith could not get an appointment with the veterinarian until next week.
(d) It has been at least one year since Pico was last vaccinated.

3. *We should not vote for the incumbent because he has already been in office for three consecutive terms.*
Which of the following hidden assumptions is being used in this argument?

(a) We should never vote for an incumbent.
(b) The incumbent has already been elected three times.
(c) Four consecutive terms is too many.
(d) We should vote for the underdog.

4. *We are all out of gasoline. Since I want to finish cutting the lawn before it rains, I need to go to town.*
Which of the following propositions is the conclusion of this argument?

(a) We are out of gasoline.
(b) I need gasoline to mow the lawn.
(c) I need to go to town.
(d) The grass needs to be cut.

5. *Jenny must have found a new job because I haven't seen her in the career center for weeks.*
Which of the following propositions is the conclusion of this argument?

(a) Jenny hasn't been to the career center for weeks.
(b) I haven't seen Jenny in the career center for weeks.
(c) Jenny needs a job.
(d) Jenny must have found a new job.

6. You are leasing a summer home for twelve weeks and need to cut the grass every week. The neighbor's son will charge you $10 per hour for the 2 hours it takes to mow the grass and will use his own equipment. If you do it yourself, you can buy a new power mower for $350 and sell it at the end of the summer for $100. Or you can rent a power mower for $18 each day. Which is the least expensive option?

(a) Hire the neighbor's son.
(b) Buy a new mower.
(c) Rent a mower.
(d) They all cost the same.

Unit 1E Test 4 *(continued)*

Name:_____

7. Which of the following is not a hidden danger with a calling plan that offers all calls of up to 20 minutes for just 99¢?

(a) The cost of reaching a friend's answering machine
(b) The cost per minute after the first 20 minutes
(c) The cost of a 20-minute call
(d) Monthly service fees

8. Maternity insurance, with a $500 deductible, will cost Anne an extra $280 per month. She will need to purchase it for a total of 15 months to carry her through an eligibility period and the maternity and delivery. She would also have to pay a $900 co-pay as part of the insurance contract. Paying for the maternity and delivery herself should cost Anne about $5000. If an emergency occurs (such as an emergency C-section), her regular insurance would cover it. Which option should she choose?

(a) Maternity insurance
(b) Pay out-of-pocket herself
(c) The cost of each option is the same.

9. Ben has to decide whether to drive from Los Angeles to Las Vegas or fly. If he drives it will take four hours. If he flies it will take 30 minutes to drive to the airport, one hour to check-in, one hour in the air, and 20 minutes to take a cab from the airport to his destination.
Which is the faster option?

(a) Driving to Las Vegas
(b) Flying to Las Vegas
(c) Each option takes the same amount of time.

10. Mr. Burns is going to Miami and wants to rent a car there. The price per day to rent a car is $25 and the first 100 miles are included. After 100 miles the price per mile is $0.50. The weekly rate to rent a car is $100 plus $0.20 per mile. The weekly rate is for seven days. Which of the following situations would make the weekly rate more economical?

(a) Mr. Burns is staying in Miami for 3 days and plans to drive 50 miles.
(b) Mr. Burns is staying in Miami for 6 days and plans to drive 200 miles.
(c) Mr. Burns is staying in Miami for 4 days and plans to drive 125 miles.
(d) Mr. Burns is staying in Miami for 2 days and plans to drive 250 miles.