Recognizing arguments Sept 5, 2014

Midterm: chapters 1 & 2

Aristotle = humanist (curious of human beings)

- Driven by emotions, passions
- Recognize simple truths like math
- Recognize mutual truths
- Tries to emphasize and feature "reason"
- Logos = logic

Aletheia = truth in Greek

"therefore" signals conclusion

argument = a set of claims
conclusion = claim meant to be supported by reasons offered in an argument
premise = a claim put forth as a reason for conclusion

premise indicators: "here are the facts"

- "here is what we know"
- "announcing a degree of certainty"
- "given that"

conclusion indicators: "therefore"

- "consequently"
- "because of this, consequences are"
- "hence"
- "we may conclude"
- "this entails"
- "this is the reasons why"
- "thus"
- "as such"

a reliable and fail safe way:

- is there a moral claim?
- Moral claims are judgements and do not exist properly speaking
- ALL MORAL/ETHICAL CLAIMS CAN NEVER BE FACT – MUST BE ARGUED

If you see the word "ought" or "should" it is a moral claim

The future is ALWAYS an argument

- Any prediction
- Future – hasn't happened yet, therefore can never be perfect
- Is not a fact because it hasn't happened yet

In a complex argument, have many arguments, only one conclusion.

1 inference = 1 conclusion

Exercises:
A:
1 – no argument
2 - simple argument
3 – complex argument
4 – no argument
5 – simple argument
6 – complex argument
7 – no argument
8 – simple argument
9 – simple argument
10 – simple argument

- We use arguments in rational persuasion.
- When we want to persuade someone what we consider correct, we present arguments in it's favour.
- Arguments are also used to express our reasoning when we have no concern of persuading others.

What is an argument?

- Make a claim and to offer other claims as reason for acceptance.
- A set of claims, meant to be supported by others.

  "The only possible superpower in the world other than the United States is a unified Europe. But divisions and jealousies that date back centuries ensure that Europe will never present a truly unified front. Obviously, then, the United States will continue to be the worlds only superpower"

  "She's armed, so she's dangerous"

  Both contain arguments, and are both made up of premise and conclusion.

II. Three general considerations

A. Length of argument

- Arguments may occur in any context and involve any subject matter

  Sports, newspaper editorials, family conversations…
- Subject matter can be trivial, or profound

B. Arguments and disputes

- Argument is not a dispute.
- People disputing might use arguments to bring about agreement.
- Arguments they offer would not be the same as the dispute they are having.

C. Arguments and bad arguments

- Arguments may fail for many reasons.
- Premise may be false, irrelevant or provide inadequate support for the conclusion.

  "It hasn't rained in weeks. That means it is sure to rain tomorrow"
- Arguments can be flawed

III. Recognizing arguments

A. Interference indicators

- Argument tells us the claims that constitute the premises are meant to support the conclusions.

- Argument is a matter of intention.
  Today is the 5th.

Premise: Today the 5th
Conclusion: Yesterday was the 4th

Premise: Yesterday was the 4th
Conclusion: Today is the 5th

B. Unstated (implicit) premises and conclusions

- In case indicator words are absent, the context of the argument is presented and often serves to make clear what is intended as premise and conclusion.
  "The victim's car was last seen driving down Green Street at 10 p.m.; Smith left the pool hall at about that time; the murder took place after that time."
  - A journalist may use the facts in a report without trying to draw a conclusion
  - A detective may use the first two claims as support for the final
  - A lawyer may use all three

C. Questions, commands, exclamations, and exhortations

- Arguments are a set of claims
- Questions, commands, exclamations, and exhortations **ARE NOT** part of arguments.
  - They make no claims

IV. Multiple conclusions and complex arguments

A. Single or multiple conclusion

- Erlich forgot to pay his gas bill again. It looks like the poor guy is obsessed with finishing the novel he has been writing. Anyway, he sure will be cold this winter.
  - Premise: Erlich forgot to pay his gas bill
  - Conclusion1: Erlich is obsessed with finishing the novel he is writing
  - Conclusions2: Erlich will be cold this winter
- If we draw multiple conclusions from one premise, we have several different arguments.

B. Simple and complex arguments

- Single argument contains more than one conclusions
- There are conclusions used as premise
  - Intermediate conclusions
- There are conclusions which are not premises

    - Only the arguments point
    - Final conclusion
- Arguments with no intermediate conclusions
    - Simple arguments
- When an argument has at least one intermediate conclusion
    - Complex argument
- Complex argument can have numerous intermediate conclusions, but no argument can have more than one final conclusion
-

Argument
~ A set of claims, one of which is meant to be supported by others.

Conclusion
~ A claim meant to be supported by reasons offered in an argument.

Premise
~ A claim put forth as a reason for a conclusion.
(Conclusion + Premise = Argument)

Inference
~ A move from premises in an argument to conclusion.

Inference indicators
~ They include premise and conclusion indicators.

Conclusion indicators
~ Words used to indicate a conclusion is about to be drawn.
Therefore, thus, as such….

Premise indicators
~ Words used to indicate premise is about to be given.
Here is what we know, here are the facts, given that….

Enthymemes
~ Arguments that have implicit (unstated) premises or conclusions.

Intermediate conclusions
~ An argument is a claim that is supported by other claim(s),but that itself also provides support for further conclusions.

Final conclusion
~ Argument's final point. The conclusions is not a premise for anything else in that argument.

Simple arguments
~ Arguments that have no intermediate conclusions (they contain only one inference).

Complex arguments
~ Arguments that have at least one intermediate conclusion (contains more than one inference).

A claim

~ An assertion of fact, and ordinarily we express claim by declarative sentences.

- It’s not 2 o’clock

**ASK WHY!

**Sentences with support have premises

**Look at the conclusions and determine which are the MOST important = main conclusion

**What does that claim support?

**Locate the MAIN point of the thesis

**Italicized words show what is IMPORTANT and the MAIN points

Arguments or Explanations?

· **Explanations** – shed light on something – main point is factual, undisputed, well-known – we know what happened and are stating the reasons/causes for it – main point is established (fact), but the surrounding information is in question

· **Argument** – claim to prove something – main point is disputed – needs support – we know the reasons (premises) and are using them to establish a conclusion that is in doubt – main point in doubt, but surrounding facts are well established

**How this came about? Explanations to these facts. Reasons surrounding the explanation. How did this happen?

**Tips
1. Identify the main conclusions
2. The sub-conclusions (intermediate)
3. Identify the support for the intermediate (premise – the dead end)
4. First write then you can begin writing the standard form
5. Arrow is beneath the claim it supports

Exercise A) page 24:

1. Explanation
2. Argument
3. Explanation
4. Neither!
5. Explanation
6. Argument
7. Neither!
10. Explanation
12. Explanation
14. Neither
16. Argument
18. Argument
20. Argument

8. Argument
9. Explanation

Exercise B)

**YOU DRAW THE LINE FOR THE DIAGRAM ABOVE THE MAIN CONCLUSION (INFERENCE)

B2) Argument

1. Cat 90 is the best
2. You want the best
3. You should buy cat 90

Diagram: 1 + 2

↓

3

B4) Explanation

1. Henry started a weight-lifting program
2. Weight-lifters are strong
3. Henry will soon be strong.
4. Anyone strong can make the team
5. Henry will make the team

Diagram: 1 + 2 □

↓

3 + 4□

↓

5

B6) Complex argument:

1. Clover normally has three leaves
2. Thus four-leaved clovers are rare!
3. Four-leaved clovers bring good luck
4. Never pass up a four-leaf clover

Diagram: 1

↓

2 + 3

↓

4

B8) Explanation

1. There is no cure
2. It is always lethal
3. Transmitted through pleasure
4. AIDS may be the most horrible disease in the world's history

Diagram: 1 + 2 + 3

↓
4

B10) Explanation

1. The air is crisp, and the leaves are turning to lovely reds and yellows
2. We haven't been out all week
3. We should go for a hike in the canyon this weekend
4. So, let's take a hike!

Diagram: 2

↓
3 + 1
↓
4

B12) Complex argument

1. *Weekly World News* said hikers were devoured by army ants
2. Not much in the WWE is true
3. They probably weren't. If they weren't we wont know what happened to them
4. The fate of the hikers will forever be a mystery
5. So we will always be wondering

Diagram: 1 + 2

↓
3 + 4
↓
5

B14) Complex argument

1. He is a racist
2. The detective is unlikely to be a convincing witness
3. The defendant will be acquitted

Diagram: 1

↓
2
↓
3

B16) Explanation

1. Hume was the more lucid thinker
2. He was a first rate historian, as well as a philosopher
3. His contributions were more diverse than Kant's
4. Hume never would have said the duty not to lie is so absolute that we should answer truthfully even when a would-be murderer asks where his intended victim is hiding
5. Hume's ethical thought did not suffer from the rigidity of Kant's

6. Hume was the superior thinker

Diagram: 2 + 4

↓

1 + 3 + 5

↓

6

B18) Argument

1. Dozens of people have claimed to have seen Elvis Presley since he was supposed to have died in 1978
2. That many people wouldn't be wrong
3. Elvis is still alive
4. "Hound Dog" will soon again be a best-selling single

Diagram: 1+ 2

↓

3

↓

4

B20)

1. The user will look for a greater high
2. It is likely to lead to the use of even harder drugs
3. Cocaine is addictive
4. It is illegal
5. It is bad for your nose
6. Here are some reasons why you should stop sniffing cocaine

Diagram: 1

2 + 3 + 4 + 5

6

On the exam:

****tip**

Go through textbook

Slides

4 sections

- 8 multiple choice
  - Mythological thinking to philosophical thinking
  - Chapter 1
- 4 fill in the blanks
  - Fill in missing premise or conclusion
    - ** Don't add extra information
- 8 multiple choice
  - Complex argument

    - Simple argument
    - Explanation
    - None of the above
- 3 argument diagrams
    - Standard form

Approach

Non deductive (inductive) Intention Deductive

Strong Weak Evaluation Invalid Valid

Truth Logic Unsound Sound

* sound: argument that is valid and true in the real world
* unsound: argument that is valid, but premises aren't true
* Success = 50% + 1

Exercise A – Deductive arguments
1) Invalid
3) Valid
5) Invalid
7) Valid
8) Invalid
10) Invalid
12) Invalid
14) Valid
16) Invalid
18) Invalid
20) Valid

Exercise B – Non deductive arguments
2) Successful
4) Successful
6) Successful
8) Unsuccessful
10) Successful
12) Unsuccessful
14) Conclusion 1: unsuccessful
Conclusion 2: unsuccessful
Conclusion 3: successful
16) Unsuccessful
18) -
20) Successful

Exercise C – all week, and reason why
2)
4) Could be a woman
6) She may not be good at basketball
8) Could be another type of dog

10) What's the problem with Vermont?
12) She could have just been their muse or motivated them
14) You need chemistry to do premed
16) Prejudice. Not enough support
18) Premise (idea that modern disaster prep is able to keep death toll to only a couple) is false
20) premise and conclusion are irrelevant to each other.

- Premise talking about ecology
- Conclusion talking about economy

V = "or"
&/. = and
-> = implication/if then
~ = negation (not/negative)

Exercise A
2) (P . ~ E) v ~ P
4) N v (O . A)
~ O
N

Modus Ponens – mode of affirmation (MP)

Antecedent -> Consequent
P -> Q C -> S
P C
Q S

Example:
C -> S if the car battery is charged the car will start
C the car battery is charged
S the car will start

Modus Tollens – mode of negations (MT)

P -> Q
~ Q
~ P

Example:
C -> S if the battery is charged the car will start
~ S the car battery was not charged
~ C the car will not start

Denying the antecedent – NOT VALID

P -> Q
~ P
~ Q

Example:
P -> V If you have Polio, you have a virus

V -> P If you have a virus, you have Polio
Wrong because it could be any virus.

Antecedent -> consequent

P -> V
~ P
~ V

Affirming the consequent – NOT VALID

MP tells us if we have a whale we have a mammal
All whales are mammals
W -> M
W
M

We have a mammal, therefore we have a whale
Not all mammals are whales
NOT CORRECT
W -> M
M
W

Hypothetical Syllogism (HS)

P -> Q
Q -> R
P -> R
Q -> R
P -> Q
P -> R

Example:
If we are going to have salad tonight, we are having a vegetable
It is good for my health
Salad is good for my health

S -> V
V -> H
S -> H

Disjunctive syllogism (DS)

P v Q P OR Q
~ P If we don't have P, then…
Q We must have Q

P If we have P
Q and we have Q, then…..
P . Q we can put them together

Constructive dilemma (CD)

P v Q P or Q
P -> R If we have P, then we can get R
Q -> S If we have Q, then we can get S
R v S Therefore R v S

R or S has to be true

Example:

W v P Student will do Well or Poorly
W -> A If they do well, they attend class
P -> S If they do poorly, they skip
A v S They either attend or skip

Conjunction (conj.)

P
Q
P . Q

Simplification (simp)

P . Q
P

Addition (add)

P
P v Q

Exercise B

2) P -> Q
~ Q
~ P
Modus tollens (MT)

4) ~ P -> ~Q
~ P
~ Q
Modus ponens (MP)

6) ~ P -> ~ Q
Q
P
Modus tollens (MT)

8) P -> ~ Q

~ Q
P
INVALID (affirmative consequent)

10) ~ P -> Q
P
~ Q
INVALID (denying the antecedent)

12) (P . Q) -> R
~ (P . Q)
~ R
INVALID (denying the antecedent)

14) ~ P v ~ Q
P
~ Q
Disjunctive syllogism

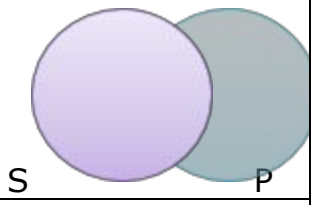
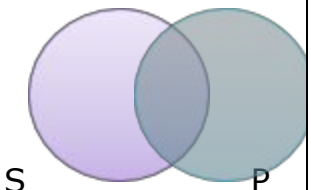
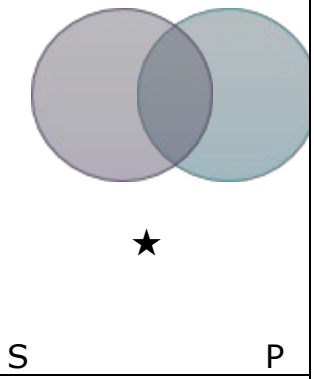
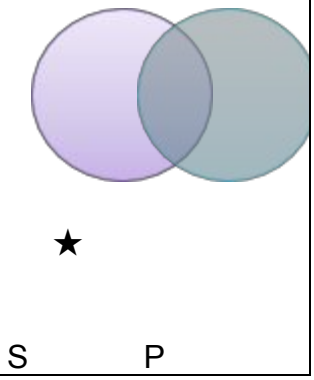
16) ~ Q -> R
P -> ~ Q
P -> R
Hypothetical syllogism (HS)

18) (P . Q) v (R v S)
~ (R v S)
P . Q
Disjunctive syllogism (DS)

20) P v Q
P -> R
Q -> S
R v S
Constructive dilemma (CD)

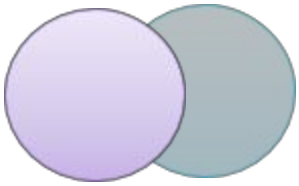
22) ~ P . Q
~ P
Simplification (simp)

24) (P . Q) -> (R v S)
~ (R v S)
~ (P . Q)
Modus tollens (MT)

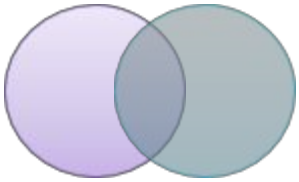
Proposition	Character	Letter	Picture
All _(S)_ are _(P)_	Universal Affirmative	A	
No _____ are _____	Universal Negative	E	
Some _____ are _____	Particular Affirmative	I	
Some _____ are not _____	Particular Negative	O	

Exercise A – Page 81

2) S R



4) S R



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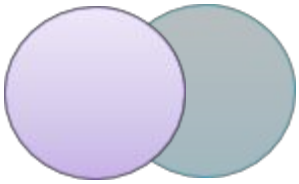
6) R S



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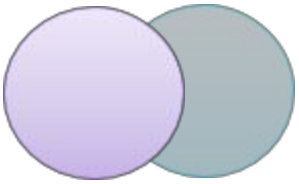
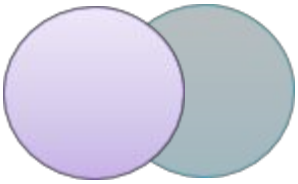
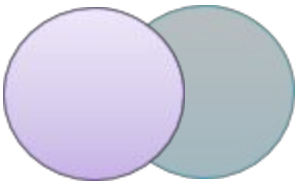
8) S R



10) S R



12) S R



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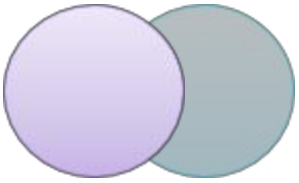
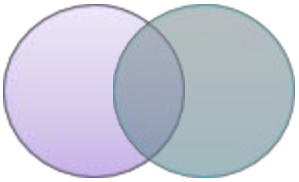
14) R S

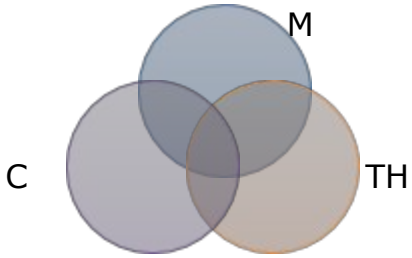


16) S R



Exercise B – Page 87

1) All computers are machines
No machines can think
No computers can think
M = machines
C = computers
TH = think

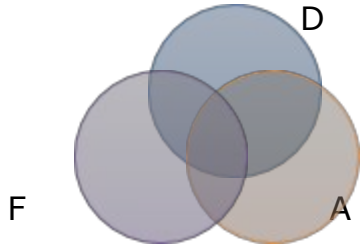


2) All pro basketball players are fine athletes
No professor of mathematics is a pro basketball
No professor of mathematics is a fine athlete

A = Athletes
B = basketball players
M = mathematics

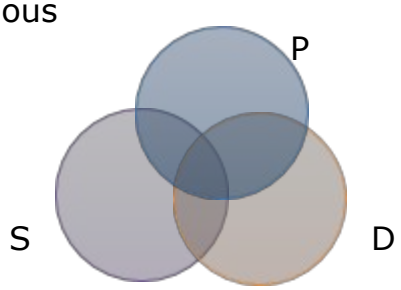
3) All fallacies are dangerous
All dangerous things are things to be avoided
All fallacies are things to be avoided

D = dangerous
F = fallacies
A = avoid



4) Some snakes are poisonous
<u>Anything that is poisonous should be destroyed</u>
Some snakes should be destroyed

S = snakes
D = destroyed
P = poisonous



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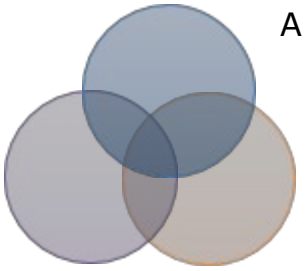
5) All slow learners require extra attention in school
<u>Some who require extra attention in school need to be in specialized classrooms</u>
Some slow learners need to be in specialized classrooms

C = classrooms
S = specialized
A = attention



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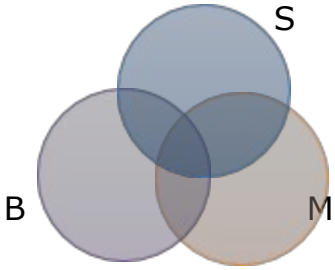
* directly on the line

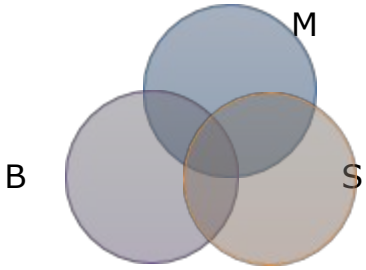
6) All flying squirrels are mammals
<u>No birds are mammals</u>
No flying squirrels are birds

S = squirrels
M = mammals
B = birds



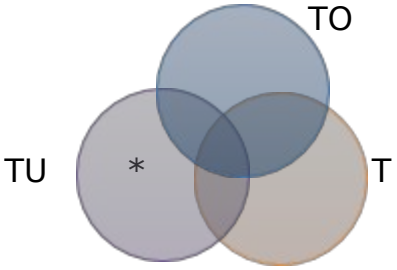
7) All flying squirrels are mammals
<u>No birds are mammals</u>
No birds are flying squirrels

S = squirrels
M = mammals
B = birds



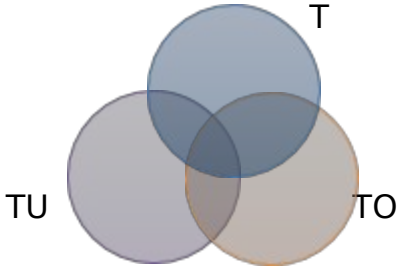
8) All tortoises are terrestrial
<u>Some turtles are not terrestrial</u>
Some turtles are not tortoises

TO = tortoises
T = terrestrial
TU = turtles



9) All tortoises are terrestrial
<u>Some turtles are not tortoises</u>
Some turtles are not terrestrial

TO = tortoises
T = terrestrial
TU = turtles



]Midterm:
Part 1: 4 questions on VD with 2 circles
- A chapter 5

Part 2: 4 questions on VD with 3 circles
- B chapter 5

Part 3: 8 questions of causal conditions (multiple choice)
- A + B chapter 6

Chapter 6 till page 96

Cause is the basis of science
- "in effect"/phenomenon

Logic tells us no cause can be proven

David Hume
- One thing, then another
- Constant conjunction
  - A causes B
- Look at what is in front of us
  - Do not add anything

Causation is induction
- Taking previous particular instances and making the general rule:
  - Overeating causes obesity
- "causing" can only be inductively inferred
- causation cannot be deductively proven

Basic causal relationships
a. Cause as sufficient condition
- If whenever the factor occurs, then the event occurs
- If A, then B
- A ⇨ B

b. Cause as necessary condition
- If the event **does not** occur in the absence of the factor
  - B ⇨ A
  - ~A ⇨ ~B

  Example:
  - HIV is necessary for AIDS
  - Precipitation is a necessary condition for snow

c. Necessary and sufficient causes
- Sufficient ⇨ necessary

- If we try to *produce* a certain phenomenon = search for sufficient cause
- If we try to *prevent* a certain phenomenon = necessary condition

d. Necessary and sufficient condition

- A if and only B
- B if and only A

Example:

  - A shape with four equal sides is the necessary and sufficient condition for having a square

Contributing factors as "causes" (all necessary and sufficient causes)

Triggering factor (proximate cause)

- Main prompt that brings about an event/phenomenon

Example:

- Pulling a trigger on a gun *causes* the machine to fire, given the background conditions are in place
  - i.e. the gun is loaded

Backgrounds/Standing/Pre-existing causes

- Constitute to the surrounding conditions or factors that contribute the casual nexus which produces event/phenomenon X

Example:

- Oxygen is a pre-existing condition for the explosion of the gas tank

Controlling factor

- Specific contributing factor for the cause of an event/phenomenon
- Controlling factor is a factoring cause that can be adjusted for controlled or varied to interrupt or reprioritize the causal sequence

Example:

- Refrain from smoking reduces lung cancer (through lung cancer can be acquired in a different way)

Exercises
Page 104

A

a. sufficient condition
b. necessary condition
c. proximate condition

d. sufficient condition
e. background condition
f. sufficient and controllable condition
g. controllable condition
h. necessary condition

B

1. triggering/proximate
2. necessary
3. necessary
4. triggering/proximate + background
5. controllable
6. sufficient
7. sufficient
8. background
9. background
10. necessary
11. triggering
12. necessary
13. controllable
14. triggering/proximate
15. necessary and sufficient

Five Fallacies of Relevance:

1. **Appeal to Ignorance**
    a. We use what we don't know to prove a point
    b. Often times will have "no one to this day has…." in the sentence

2. **Appeal to Inappropriate Authority**
    a. Person/institution commenting on something unrelated to their field, or outside their field of expertise
    b. **Example:** Doctor commenting on teaching

3. **Appeal to General Belief**
    a. A lot of people believe ___. Therefore _____ must be true.
    b. **Example:** A lot of people believe the sky is blue. Therefore it is blue

4. **Appeal to Popular Attitudes and Emotions**
    a. Making you feel bad/good about something
    b. **Example:** saying a young person needs anti-aging cream

5. **Gambler's Fallacy**
    a. Using probability
    b. **Example:** a coin has two sides (50/50 chance of each side), so if I flip it 4 times, it will land on head twice and tails twice

Two Fallacies of Inadequate Evidence:

1. **False Cause**
    a. A causes B without actual proof that A caused B
    b. **Example:** X ate a chocolate bar then killed someone
        i. No proof that candy bar caused death. Both unrelated

2. **Hasty Generalization**
    a. A few cases of something used to pull a conclusion
    b. **Example:** Two English professors were mean, therefore all English professors are mean.

Four Fallacies of Illegitimate Assumption

1. **False Dilemma**
    a. Presenting a black or white view when there are grey areas.
    b. Presenting only two ideas when there is more than two

2. **Loaded Question**
    a. When you ask a question but already assuming what the answer will be
    b. **Example:** When can I retake the exam?

i. Assuming that you will even be able to retake the exam

3. Begging the Question

a. Circular reasoning
b. Going in a circle with your logic
c. **Example:** What God says is true, his word is in the bible, therefore the bible is true, because it's the word of God

4. Slippery Slope

a. Logic goes downhill
b. "you smoke, therefore you will do weed, therefore you will do cocaine, therefore you will do heroin…"

Five Fallacies of Criticism

1. Against the Person

a. Responding to a person by attacking a person's character

2. You Too

a. Can't criticise because you do the same mistake

3. Pooh-Pooh

a. Dismiss the claim without considering if claim is legit or not
b. You may be guilty of doing the same thing, but can still criticize

4. Straw Man

a. Way to defeat argument
b. Weakened account of it used to make the response easier to counter the claim

5. Loaded Word

Fallacies of Defence

1. Definitional Dodge

a. Takes a phrase or term, and used it in a
b. Example:

**** Red Herring**

- A distraction
- Changes the subject to something more interesting

** NOT IN BOOK

Exercise C – page 143
2) Pooh-Pooh

4) Loaded words
6) Exception that proves the rule
8) Straw man
10) You too