

## Review Questions

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### Checkbox

- ☒ Premise
- ☐ A numeral
- ☒ Conclusion
- ☐ Consequent
- ☒ Logical relation

### Multiple choice

- ☐ All programmers use computers
- ☐ Some math specialists code
- ☐ No math specialists are JavaScript programmers
- ☒ All programmers are math specialists

### Checkbox

- ☐ All data is somewhere above the Empire State Building
- ☒ All your data is stored in large collections of servers accessible over the internet
- ☐ How your data is stored is ambiguous and unclear
- ☒ All the data you manage is stored in data storage services on systems like Microsoft's Azure or Amazon's AWS
- ☐ All data you manage is stored on your computer

## Checkbox

- ☒ All mammals give live birth to their offspring
- ☐ Stop it!
- ☐ Would you shut the door please?
- ☒ Pluto is the third planet from the sun
- ☒ All computer programs are not created equal

## Multiple choice

- ☐ Fleas are biting the dog
- ☐ Dogs like to scratch fleas
- ☒ The dog has fleas
- ☐ The dog does not have fleas

## Multiple choice

- ☐ A premise
- ☒ A logical relation between the premises and conclusion
- ☐ Statements
- ☐ Premises with truth value

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## Review Questions

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### Multiple choice

☐ 3

☒ 4

☐ 5

☐ 6

### Multiple choice

☐  $F \vee E$

☐  $F \vee (E \vee D \ \& \ G)$

☒  $F \vee (E \ \& \ G)$

☐  $F \vee (E \ \& \ D \ \& \ G)$

### Multiple choice

☒  $(G \rightarrow S) \vee P$

☐  $G \rightarrow (S \ \& \ P)$

☐  $(G \rightarrow S) \vee \sim P$

☐  $G \vee (S \rightarrow P)$

### Multiple choice

☐ 2

☐ 3

☐ 4

☒ 5

☐ 6

Multiple choice

☒  $A \vee (B \rightarrow (S \vee (C \wedge M)))$

☐  $A \vee B \rightarrow (S \wedge C)$

☐  $A \vee (B \rightarrow S)$

☐  $A \vee (((B \rightarrow S) \wedge C \vee M) \wedge G)$

## Review Questions

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### 1. Multiple choice

- ☒ Inductive Argument
- ☐ Deductive Argument

### 2. Multiple choice

- ☐ Inductive Argument
- ☒ Deductive Argument

### 3. Multiple choice

- ☐ Inductive Argument
- ☒ Deductive Argument

### 4. Multiple choice

- ☒ Inductive Argument
- ☐ Deductive Argument

### 5. Multiple choice

- ☒ Inductive Argument
- ☐ Deductive Argument

### 6. Multiple choice

- ☒ Inductive Argument
- ☐ Deductive Argument

### 7. Multiple choice

- ☐ Inductive Argument
- ☒ Deductive Argument

## 8. Multiple choice

- ☐ Inductive Argument
- ☒ Deductive Argument

## 9. Multiple choice

- ☒ Inductive Argument
- ☐ Deductive Argument

## 10. Multiple choice

- ☒ Inductive Argument
- ☐ Deductive Argument

## Review Questions 1

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### 1. Multiple choice

- ☐ Valid
- ☒ Invalid

### 2. Multiple choice

- ☒ Valid
- ☐ Invalid

### 3. Multiple choice

- ☒ Valid
- ☐ Invalid

### 4. Multiple choice

- ☐ Valid
- ☒ Invalid

### 5. Multiple choice

- ☐ Valid
- ☒ Invalid

### 6. Multiple choice

- ☐ Valid

- ☒ Invalid

## 7. Multiple choice

- ☐ Valid
- ☒ Invalid

## 8. Multiple choice

- ☒ Valid
- ☐ Invalid

## 9. Multiple choice

- ☒ true premises and a false conclusion
- ☐ true premises and a true conclusion
- ☐ false premises and a false conclusion
- ☐ false premises and a true conclusion
- ☐ none of the above

## 10. Multiple choice

- ☐ true premises and a false conclusion
- ☐ true premises and a true conclusion
- ☐ false premises and a false conclusion
- ☐ false premises and a true conclusion
- ☒ none of the above, for *any* combination is possible in an invalid argument



## Review Questions 2

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### 1. Multiple choice

- ☐  $p \rightarrow (q \vee r); p; \text{ therefore, } q \vee r$
- ☒  $(p \wedge q) \vee (r \vee t); \sim(r \vee t); \text{ therefore } p \wedge q$
- ☐  $p \rightarrow q; q; \text{ therefore } p$
- ☐  $p \rightarrow q; \sim q; \text{ therefore } p$

### 2. Multiple choice

- ☐  $p \rightarrow (q \vee r); p; \text{ therefore, } q \vee r$
- ☐  $(p \wedge q) \vee (r \vee t); \sim(r \vee t); \text{ therefore } p \wedge q$
- ☐  $p \rightarrow q; q; \text{ therefore } p$
- ☒  $(p \wedge r) \rightarrow q; \sim q; \text{ therefore } \sim(p \wedge r)$

### 3. Multiple choice

- ☐  $p \rightarrow (q \vee r); p; \text{ therefore, } q \vee r$
- ☒  $[(p \wedge q) \vee (r \vee t)] \rightarrow r; r \rightarrow (s \wedge t); \text{ therefore } [(p \wedge q) \vee (r \vee t)] \rightarrow s \wedge t$
- ☐  $p \rightarrow q; q; \text{ therefore } p$
- ☐  $[(p \wedge q) \vee (r \vee t)] \rightarrow r; \sim r; \text{ therefore } \sim[(p \wedge q) \vee (r \vee t)]$

### 4. Multiple choice

- ☒  $p \rightarrow (q \vee r); p; \text{ therefore, } q \vee r$
- ☐  $(p \wedge q) \vee (r \vee t); \sim(r \vee t); \text{ therefore } p \wedge q$
- ☐  $p \rightarrow q; q; \text{ therefore } p$
- ☐  $p \rightarrow q; \sim q; \text{ therefore } p$

## Review Questions

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### 1. Multiple choice

- ☒ Strong
- ☐ Weak

### 2. Multiple choice

- ☐ Strong
- ☒ Weak

### 3. Multiple choice

- ☐ Strong
- ☒ Weak

### 4. Multiple choice

- ☒ Strong
- ☐ Weak

### 5. Multiple choice

- ☒ Strong
- ☐ Weak

### 6. Multiple choice

☐ Strong

☒ Weak

## 7. Multiple choice

☒ Strong

☐ Weak

## 8.1 Multiple choice

☐ Strengthen the argument

☒ Weaken the argument

☐ Unchanged

## 8.2 Multiple choice

☒ Strengthen the argument

☐ Weaken the argument

☐ Unchanged

## 8.3 Multiple choice

☒ Strengthen the argument

☐ Weaken the argument

☐ Unchanged

## 8.4 Multiple choice

☐ Strengthen the argument

☒ Weaken the argument

- ☐ Unchanged

## 8.5 Multiple choice

- ☒ Strengthen the argument
- ☐ Weaken the argument
- ☐ Unchanged

## 8.6 Multiple choice

- ☐ Strengthen the argument
- ☒ Weaken the argument
- ☐ Unchanged

## 9.1 Multiple choice

- ☐ Strengthen the argument
- ☒ Weaken the argument
- ☐ Unchanged

## 9.2 Multiple choice

- ☐ Strengthen the argument
- ☒ Weaken the argument
- ☐ Unchanged

## 9.3 Multiple choice

- ☒ Strengthen the argument
- ☐ Weaken the argument
- ☐ Unchanged

#### 9.4 Multiple choice

- ☐ Strengthen the argument
- ☒ Weaken the argument
- ☐ Unchanged

#### 9.5 Multiple choice

- ☐ Strengthen the argument
- ☒ Weaken the argument
- ☐ Unchanged

#### 9.6 Multiple choice

- ☐ Strengthen the argument
- ☒ Weaken the argument
- ☐ Unchanged

#### 9.7 Multiple choice

- ☐ Strengthen the argument
- ☒ Weaken the argument
- ☐ Unchanged

#### 9.8 Multiple choice

- ☒ Strengthen the argument
- ☐ Weaken the argument
- ☐ Unchanged

## Review Questions

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### 1. Multiple choice

- ☒ A (Universal Affirmative)
- ☐ E (Universal Negative)
- ☐ I (Particular Affirmative)
- ☐ O (Particular Negative)

### 2. Multiple choice

- ☐ A (Universal Affirmative)
- ☒ E (Universal Negative)
- ☐ I (Particular Affirmative)
- ☐ O (Particular Negative)

### 3. Multiple choice

- ☐ A (Universal Affirmative)
- ☐ E (Universal Negative)
- ☐ I (Particular Affirmative)
- ☒ O (Particular Negative)

### 4. Multiple choice

- ☐ A (Universal Affirmative)
- ☒ E (Universal Negative)
- ☐ I (Particular Affirmative)
- ☐ O (Particular Negative)

## 5. Multiple choice

- ☐ A (Universal Affirmative)
- ☐ E (Universal Negative)
- ☒ I (Particular Affirmative)
- ☐ O (Particular Negative)

## 6. Multiple choice

- ☒ A (Universal Affirmative)
- ☐ E (Universal Negative)
- ☐ I (Particular Affirmative)
- ☐ O (Particular Negative)

## 7. Multiple choice

- ☐ A (Universal Affirmative)
- ☒ E (Universal Negative)
- ☐ I (Particular Affirmative)
- ☐ O (Particular Negative)

## 8. Multiple choice



- ☒ A (Universal Affirmative)
- ☐ E (Universal Negative)
- ☐ I (Particular Affirmative)
- ☐ O (Particular Negative)

## 9. Multiple choice

- ☒ A (Universal Affirmative)
- ☐ E (Universal Negative)
- ☐ I (Particular Affirmative)
- ☐ O (Particular Negative)

## 10. Multiple choice

- ☐ A (Universal Affirmative)
- ☒ E (Universal Negative)
- ☐ I (Particular Affirmative)
- ☐ O (Particular Negative)

## Review Questions

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### 1. Multiple choice

- ☐ Some drops of seawater are salty things
- ☐ Most drops of seawater are salty
- ☒ All drops of seawater are salty things
- ☐ A drop of seawater is salty thing

### 2. Multiple choice

- ☒ All olives are things that are a good source of cooking oil
- ☐ All olives are used for cooking oil
- ☐ Olives are things used in cooking
- ☐ An olive is a good source of cooking oil

### 3. Multiple choice

- ☐ Some critical thinkers are calm and rational
- ☐ All critical thinkers are calm and rational when faced with criticism
- ☒ All critical thinkers are persons who accept criticism calmly and rationally
- ☐ Any calm and rational person when faced with criticism is a critical thinker

### 4. Multiple choice

- ☐ No irrational person accepts criticism calmly

- ☒ No irrational person are persons who accept criticism calmly
- ☐ All irrational persons are persons who do not accept criticism calmly
- ☐ No rational persons accepts criticism calmly

## 5. Multiple choice

- ☐ No rocks are a good source of cooking oil
- ☒ No rocks are things that are a good source of cooking oil
- ☐ No rocks are things and no rocks are a good source of cooking oil
- ☐ Some rocks are not things that are a good source of cooking oil

## 6. Multiple choice

- ☒ Some citizens are people that voted
- ☐ Some people are voting citizens
- ☐ All citizens are people that voted
- ☐ Some citizens are people that did not vote

## 7. Multiple choice

- ☐ All computer programmers are fashionable
- ☐ Some fashionable people program computers
- ☐ Some computer programmers are fashionable
- ☒ Some computer programmers are fashionable people

## 8. Multiple choice

- ☐ No critical thinkers are artists
- ☐ Some non-artists are critical thinkers
- ☒ Some critical thinkers are not artistic people
- ☐ Some artists are not critical thinkers

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### 1. Multiple choice

- ☒ Valid
- ☐ Invalid

### 2. Multiple choice

- ☒ Valid
- ☐ Invalid

### 3. Multiple choice

- ☒ Valid
- ☐ Invalid

### 4. Multiple choice

- ☐ Valid
- ☒ Invalid

### 5. Multiple choice

- ☒ Valid
- ☐ Invalid