Questions about identifying assumptions or conclusions are not typical in standardized school exams. That's why most examinees find it challenging to answer them.

To ace these questions, good reading comprehension, and test-taking strategies are required. You also need to understand the difference between an assumption and a conclusion.

Let us practice identifying assumptions and conclusions in this reviewer.

Part I: Identifying Assumption

What Is an Assumption?

An assumption is unstated or hidden information that must be true so that a given statement holds.

Take note of the word "unstated" in our definition above. This means that we cannot explicitly see the assumption of a particular statement. Instead, we have to infer it based on the information given.

Let us start with this simple example to help you further understand what an assumption is.

Let us identify a possible assumption for the statement below.

Given statement: *Rizal is a patriotic and intelligent Filipino, so he should be a Philippine national hero.*

From the given statement above, here's one of the valid assumptions we can think of:

Valid assumption: *Patriotism and intelligence are essential attributes of being a national hero.*

What makes the statement above a valid assumption for the given statement?

We can connect and derive the given statement from this assumption. To show this, we start by supposing that the assumption is true. Suppose we assume that patriotism and intelligence are essential attributes of being a national hero. In that case, we can conclude that, indeed, Rizal should be a Philippine national hero (as mentioned in the statement).

Here's another way to analyze:

The given statement argues that Rizal should be a national hero because he is a patriotic and intelligent Filipino. Ask yourself: *"Why do you think this statement is true?*"

The answer is *that patriotism and intelligence are essential attributes of being a national hero*. We have sufficiently answered the question using the assumption!

Thus, **an assumption must be able to support the truthfulness of the given statement. If the assumption cannot support it, then it is not valid.** In other words, the assumption must explain why the given statement holds.

Now, let us look at a case where a statement is not a valid assumption of another. Let us use our previous example.

Given statement: *Rizal is a patriotic and intelligent Filipino, so he should be a Philippine national hero.*

Not a valid assumption: *A Philippine national hero died fighting for the country*.

If we use the assumption above as the premise of the given statement, we will not be able to derive the given statement. In other words, the assumption and the given statement are not logically connected. The assumption is about dying to become a national hero, while the given statement talks about patriotism and intelligence as attributes of a national hero. For this reason, the assumption is not valid for the given statement.

Here's another way to test the assumption:

The given statement argues that Rizal should be a national hero because he is a patriotic and intelligent Filipino. Ask yourself: *"Why do you think this statement is true?*"

If you answer it with this: *"because a Philippine national hero is someone who died fighting for the country,"* you're unable to show the truthfulness of the given statement because your answer is not related to it

From here, we can see that the sentence

Philippine national hero is someone who died fighting for the country.

is not a valid assumption to state that

Rizal is a patriotic and intelligent Filipino, so he should be a Philippine national hero.

Sample Problem: Which of the following is the best assumption for the statement *"Bella must not be included in the writing team because she never earned a degree in English"?*

I. Members of the writing team must be proficient in English
II. Bella is not qualified to be a member of the writing team
III. The writing team desperately needs Bella's English writing skills
IV. Members of the writing team must have a degree in English

Answer: Statement IV is the best assumption for the statement. If we assume that the members of the writing team must have an English degree, then we can conclude that Bella should not be included in the writing team because she has no English degree. The assumption can support the given statement and is logically connected.

Let us discuss why statements I to III are not good assumptions for the given statement.

Statement I, as an assumption, cannot support the statement's truthfulness. If we suppose that the writing team members must be proficient in English, it does not necessarily mean that someone with no degree in English must not be included in the team. The assumption restricts the membership on the writing team based on English proficiency and not on a college degree.

Statement II, as an assumption, cannot support the truthfulness of the given statement. If we assume this statement is true, we're not guaranteed that the given statement is true as well. Assuming that Bella is not qualified, we cannot conclude that Bella never earned a degree in English from this assumption alone.

Statement III, as an assumption, cannot support the truthfulness of the given statement. We cannot conclude from this assumption the given statement because they are logically unrelated.

How To Find the Best Assumption of a Statement: Tips and Strategies

1. Your Assumption Must Answer the Question "Why"

This is the most reliable trick to determine whether an assumption is valid. If the assumption can satisfy *why* a statement holds, then it is valid.

Sample Problem 1:

Given Statement: Chrissy is very excited because he will finally see his father again.

Here are the choices:

A) Chrissy has had no mother since she was young.
B) Chrissy has an abusive father who is visiting the Philippines.

C) Chrissy's father has worked abroad for many years.

Ask yourself: *"Why?" What makes Chrissy excited to see his father again?*

Statement A does not answer the question "why" sufficiently. Statement A and the given statement seem logically unrelated because the former talks about Chrissy being motherless while the latter talks about Chrissy's excitement about seeing her father again.

Statement B is not a reasonable assumption. Chrissy's excitement of seeing his father again because he is abusive does not make sense.

Statement C fits well as the best assumption. It makes sense to answer *"because her father worked abroad for many years"* to the question, "*Why is Chrissy excited to see his father again finally"?*

Sample Problem 2:

Given Statement: Surprisingly, most of the audience positively reacted to the new science-fiction movie after its release.

Here are the choices:

A) The new science-fiction movie has an intriguing plot and state-of-the-art VFX.
B) The majority of the audience loves films of the romantic genre compared to the science-fiction genre
C) The majority of the audience's pre-release reaction to the new science-fiction movie was negative.

Statement A seems insufficient to explain "why" it is surprising that audiences have a positive reaction to the movie. If we assume that the new sci-fi movie has an intriguing plot and great VFX, then it should not be surprising that the audience will react positively to it. In other words, this assumption contradicts the conclusion.

Statement B is also not a valid assumption. Again, this assumption cannot explain “why” the audience's positive reaction to the sci-fi film was surprising. Furthermore, the given statement never discussed the romantic movie genre, so this assumption and the given statement are logically unrelated.

Statement C is the best assumption among the three. Suppose we assume that most of the audience reacted negatively before the sci-fi movie’s release date. In that case, it makes sense why it is surprising that after its release, the sci-fi movie got a positive reaction from the majority of the audience.

Thus, the answer is C.

2. If an Assumption Is Too Specific and the Given Statement Is Generalized, the Assumption Is Most Likely Invalid

Consider this statement: “People under 18 should be prohibited from playing violence-themed video games.”

Meanwhile, here’s the assumption: “Young Filipinos are becoming more violent because of violence-themed video games.”

Do you think this assumption is valid for the given statement?

No, this assumption is invalid because it only tells us that young Filipinos are more violent because of video games. From here, we cannot conclude the given statement that generalized people under 18 are prohibited from playing violence-themed video games.

3. Use the Negative of the Assumption To Test Its Validity

To determine if an assumption is valid for the given statement, negate it, and see if the given statement fails. If that's the case, then the assumption is valid.

But what does "negating" a statement mean?

The negative of a statement is simply the opposite of its thought. For example, the opposite of the statement: "*Honesty is the best policy"* is *"Honesty is not the best policy."*

Before we proceed, try negating these statements:

a) Sheila's singing skills are exceptional.
b) The economy is experiencing rapid inflation due to supply shocks.
c) A lousy workman always blames his work tools.

Here are the respective negatives of the statements above:

a) Sheila's singing skills are not exceptional
b) The economy is not experiencing rapid inflation despite the supply shocks.
c) A lousy workman never blames his work tools.

Now that you know how to find the negatives of various statements let us proceed on how to use these negatives to identify whether an assumption is valid.

Sample Problem 1: *Solons are rushing to pass another law that will benefit scientists and researchers more financially.*

Which of the following is the most valid assumption for the statement above?

a) There's still no existing law that provides financial benefits to scientists and researchers.

b) Solons feel empathy about the insufficient financial benefits the scientists and researchers received.
c) Scientists and researchers go abroad for employment opportunities that have more financial benefits.

Solution:

To answer this problem, we negate each statement and see if the given statement fails:

Statement (a):

Negation - Existing laws provide financial benefits to scientists and researchers.

Even if existing laws provide financial benefits to the scientists, it doesn't mean that the solons (lawmakers) will not pass another law that will provide more benefits to them. Hence, even if we negate this assumption, the statement still holds. So, this is not the most valid assumption.

Statement (b):

Negation - Solons don't feel empathy about the insufficient financial benefits received by scientists and researchers.

Even if the solons don't feel empathy about the struggles of the scientists, it doesn't mean that they will not create laws that will give them financial benefits. It's the job of the solons to craft laws for their constituents regardless of whether they feel empathy for their struggle.

Statement (c):

Negation - Scientists and researchers are not going abroad for employment opportunities that have more financial benefits.

If this is the case, then it does not make sense for solons to rush the creation of a law that will provide more financial benefits to scientists and researchers. Note that the given statement fails in this case.

Therefore, the most valid assumption among the three is C.

Sample Problem 2: Now, let us try this technique to answer one of our previous examples:

Rizal is a patriotic and intelligent Filipino, so he should be a Philippine national hero.

Which of these two statements is more valid as the assumption of the given statement?

a) A Philippine national hero died fighting for the country.
b) Patriotism and intelligence are essential attributes of being a national hero.

Solution:

Statement (a):

Negation: A Philippine national hero is someone who did not die fighting for the country.

With this negated assumption, the given statement still holds. Even if someone did not die fighting for the country, he could still be considered a national hero based on other merits. Therefore, this statement is not the most valid.

Statement (b):

Negation: Patriotism and intelligence are not essential attributes of being a national hero.

If we assume this, then the given statement does not make sense since we've recognized that patriotism and intelligence are not essential attributes of being a national hero. Hence, the given

statement fail with this negated assumption. Therefore, this statement is more valid than the other.

Part II. Identifying Conclusion

What Is a Conclusion?

A conclusion is a statement that was derived from given premises or arguments. It is the logical result of certain initial statements.

Try to think of the best conclusion from these premises:

If I pass the exam, I will join the competition. I passed the exam. What should be the conclusion?

This is not that complicated. By intuition, it's pretty clear that the conclusion is that you will join the competition since the condition for this to happen is that you should pass the exam.

However, it's not always the case that the given premises or statements are simple. Take a look at this example:

Local government units that imposed curfews have a lot of disobedient residents. It is said that the local government unit of Lemongate City has no disobedient residents.

Can you quickly determine the conclusion for the statements above?

If not, don't worry, as we will learn how to derive it in the next section.

Identifying the Best Conclusion Using Valid Arguments Forms

If certain premises follow the valid argument forms, it's pretty easy to arrive at the best conclusion. In this section, we will talk about the basics of valid argument forms and how to use them to spot the best conclusion.

1. Modus Ponens

If P and Q are premises, then the general form of a modus ponens is

(Premises) : *If P then Q. P.* (Conclusion): *Therefore, Q*

Here's a simple example:

If a student fails his/her exam, then he/she will take a summer class. Rica failed her exam.

What should be the conclusion that is true by invoking modus ponens?

The statement's premises perfectly follow the structure to apply modus ponens:

- *If a student fails his/her exam (If P), then he/she will take a summer class (then Q).*
- *Rica failed her Exam (P.)*

Thus, the conclusion should be, *"Therefore, Rica will take a summer class."*

Sample Problem: Select the best conclusion for the statement below:

If someone loves to read, he/she has a great imagination. Luca loves to read.

a) Therefore, he has a great imagination
b) Therefore, he may or may not have a great imagination
c) Therefore, he has a limited imagination

Solution:

The form of the premises allows us to arrive at a conclusion that is valid according to modus ponens:

- *If someone loves to read, then he/she has a great imagination (If P then Q).*
- *Luca loves to read (P).*

Thus, the conclusion should be in the form, *Therefore, Q*:
Therefore, he has a great imagination.

Thus, the answer is A.

2. Modus Tollens

If P and Q are premises, then the general form of Modus Tollens is

(Premises) *If P then Q. Not Q.* (Conclusion) *Not P*

Here's an example:

If a student fails his/her exam, he/she will take a summer class. If Rica will not take a summer class.

What should be the conclusion that is valid based on modus tollens?

The premises now follow the condition to invoke modus tollens.

- *If a student fails his/her exam, then he/she will take a summer class* (If P then Q).
- *Rica will not take a summer class* (Not Q).

From here, we can see that the conclusion should be, *Therefore, not P*:
Therefore, Rica did not fail her exam.

Sample Problem: *Local government units that imposed curfews have a lot of disobedient residents. It is said that the local government unit of Lemongate City never imposed a curfew.*

Solution: The premises are actually in a form that enables us to invoke modus tollens.

- *Local government units that imposed curfews have a lot of disobedient residents* (If P then Q).
- *It is said that the local government unit of Lemongate City has no disobedient residents* (Not Q).

We can see that the conclusion should be, *therefore, not P*.

Therefore, the local government unit of Lemongate City did not impose curfews.

3. Hypothetical Syllogism

If P, Q, and R are premises, then the general form of a hypothetical syllogism is:

(Premises) *If P then Q. If Q then R.* (Conclusion) *Therefore, if P then R.*

Here's an example:

If the law is equal, then peace endures. If peace endures, then love prevails.

Can you identify the conclusion using hypothetical syllogism?

We have

- *If the law is equal, then peace endures. (If P then Q)*
- *If peace endures then love prevails (If Q then R)*

Hence, the conclusion should be in the form *If P then R*:

If the law is equal, then love prevails.

4. Disjunctive Syllogism

If P and Q are premises, then the general form of a disjunctive syllogism is:

(Premises) *Either P or Q. Not P.* (Conclusion) *Therefore, Q.*

Here's an example:

Either the student fails the exam or never attended his classes. The student passed his exam.

What is the conclusion of this statement?

The form of the premises allows us to invoke disjunctive syllogism to form a valid conclusion:

- *Either the student fails the exam or never attended his classes (Either P or Q).*
- *The student passed his exam (Not P).*

From here, we can see that the conclusion should be in the form, *Therefore, Q.*

Therefore, the student never attended his classes.

5. Conjunction

If P and Q are premises, then the general form of conjunction is:

(Premises) *If P is true. If Q is true.* (Conclusion) *Therefore P and Q are true*

Here's an example:

The castle is ancient. The relics are authentic.

Assuming that these statements are factual, then the conclusion based on conjunction, which is: *The castle is ancient and the relics are authentic* is also true.

Now that you're familiar with the valid argument forms let us use this knowledge to determine the best conclusion for a given set of statements.

To find the best conclusion, we will use the following steps:

1. Determine the form of the premises
2. Select the statement that will lead to a valid argument form using the premises as a guide.

Sample Problem: *If someone can dream of exploring the unknown, he/she must be a risk-taker. Julia is not a risk-taker.*

a) Julia can dream of exploring the unknown
b) Julia cannot dream of exploring the unknown
c) Julia can be a risk-taker

Solution:

Step 1: *Determine the form of the premises*

- *If someone can dream of exploring the unknown, he/she must be a risk taker (*If P then Q)
- *Julia is not a risk taker* (not Q)

The premises above seem to be the premises of a **modus tollens**.

Step 2: Select the statement that will lead to a valid argument form using the premises as a guide.

We know that in a modus tollens, the conclusion is in the form, *Therefore, not P*. Hence the most valid conclusion for the statement is the one given in option b which is *Julia cannot dream of exploring the unknown.*