

```
[76]: # Generate the response - For Query 1
response = generate_response(query, top_3_RAG_query1)
print("-"*80,"\n","-*78")
print("Query 1: ",query)
print("-"*80,"\n","-*78","\n")

# Print the response
print("\n".join(response))
```

Query 1: What are the specific eligibility requirements for a person to be considered a 'Member'?

To be eligible for Member Life Insurance, a person must complete 30 consecutive days of continuous Active Work with the Policyholder as a Member. Additionally, a person is not eligible if they are already eligible under any other Group Term Life Insurance policy underwritten by The Principal.

Citations:

* Principal-Sample-Life-Insurance-Policy, Page 26

```
[56]: print("First Query :: ", query , "\n")
```

First Query :: What are the specific eligibility requirements for a person to be considered a 'Member'?

```
[57]: # Return the top 3 results from semantic search
top_3_semantic = results_df.sort_values(by='Distances')
top_3_semantic[:3]
```

	Metadata	Document	Distances	IDs	Reranked_scores
0	{'Page_No.': 'Page 27', 'Policy_Name': 'Princi...}	If a Member's Dependent is employed and is co...	0.570850	24	0.183803
1	{'Page_No.': 'Page 26', 'Policy_Name': 'Princi...}	PART III - INDIVIDUAL REQUIREMENTS AND RIGHTS ...	0.603818	23	1.642594
2	{'Page_No.': 'Page 6', 'Policy_Name': 'Princip...}	TABLE OF CONTENTS PART I - DEFINITIONS PART II...	0.658628	3	-7.846834

```
[58]: # Return the top 3 results after reranking
top_3_rerank = results_df.sort_values(by='Reranked_scores', ascending=False)
top_3_rerank[:3]
```

	Metadata	Document	Distances	IDs	Reranked_scores
1	{'Page_No.': 'Page 26', 'Policy_Name': 'Princi...}	PART III - INDIVIDUAL REQUIREMENTS AND RIGHTS ...	0.603818	23	1.642594
0	{'Page_No.': 'Page 27', 'Policy_Name': 'Princi...}	If a Member's Dependent is employed and is co...	0.570850	24	0.183803
8	{'Page_No.': 'Page 17', 'Policy_Name': 'Princi...}	a. be actively engaged in business for profit ...	0.736450	14	-1.257841

```
[59]: top_3_RAG_query1 = top_3_rerank[["Documents", "Metadatas"]][:3]

top_3_RAG_query1
```

	Documents	Metadata
1	PART III - INDIVIDUAL REQUIREMENTS AND RIGHTS ...	{'Page_No.': 'Page 26', 'Policy_Name': 'Princi...}
0	If a Member's Dependent is employed and is co...	{'Page_No.': 'Page 27', 'Policy_Name': 'Princi...}
8	a. be actively engaged in business for profit ...	{'Page_No.': 'Page 17', 'Policy_Name': 'Princi...}

```
[77]: # Generate the response - For Query 2
response2 = generate_response(query2, top_3_RAG_query2)
print("-"*80,"\\n","-*78")
print("Query 2: ",query2)
print("-"*80,"\\n","-*78, "\\n")

# Print the response
print("\\n".join(response2))
```

Query 2: Under what circumstances can The Principal or the Policyholder terminate the group policy?

The Principal or the Policyholder can terminate the group policy under the following circumstances:

****The Policyholder can terminate the group policy if:****

- * The total premium due has not been received by The Principal before the end of the Grace Period. Failure to pay the premium within the Grace Period is considered notice by the Policyholder to discontinue the Group Policy.
- * The Policyholder provides Written notice to The Principal prior to any premium due date, making the termination effective the day before that premium due date.
- * The Policyholder issues a stop-payment order for any amounts used to pay premiums for their coverage, which is considered Written notice of termination.

****The Principal can terminate the group policy if:****

- * The Policyholder relocates to a state where the Group Policy is not marketed. The Principal must give 31 days advanced notice in Writing.
- * The Policyholder ceases to be actively engaged in business for profit or established as a legitimate nonprofit corporation.
- * The Policyholder fails to maintain the required participation percentages with respect to eligible employees.
- * The Policyholder fails to maintain three or more insured employees under the Group Policy.
- * The Policyholder fails to pay premium in accordance with the requirements.
- * The Policyholder has performed an act or practice that constitutes fraud or has made an intentional misrepresentation of material fact under the terms of the Group Policy.
- * The Policyholder does not promptly provide The Principal with information that is reasonably required.
- * The Policyholder fails to perform any of its obligations that relate to the Group Policy.
 - * In these cases, The Principal may nonrenew or terminate the Group Policy by giving the Policyholder 31 days advance notice in Writing.

Citations:

- * Principal-Sample-Life-Insurance-Policy, Page 23
- * Principal-Sample-Life-Insurance-Policy, Page 24

```
[64]: print("Second Query :: ", query2 , "\n")
```

Second Query :: Under what circumstances can The Principal or the Policyholder terminate the group policy?

```
[65]: # Return the top 3 results from semantic search
```

```
top_3_semantic2_query2 = results_df2.sort_values(by='Distances')
```

```
top_3_semantic2_query2[:3]
```

```
[65]:
```

	Metadatas	Documents	Distances	IDs	Reranked_scores
0	{'Page_No.': 'Page 24', 'Policy_Name': 'Princi...'}	The Principal may terminate the Policyholder'...	0.324605	21	8.025837
1	{'Page_No.': 'Page 16', 'Policy_Name': 'Princi...'}	PART II - POLICY ADMINISTRATION Section A - Co...	0.435124	13	4.941992
2	{'Page_No.': 'Page 23', 'Policy_Name': 'Princi...'}	Section C - Policy Termination Article 1 - Fai...	0.438009	20	7.518888

```
[66]: # Return the top 3 results after reranking
```

```
top_3_rerank_query2 = results_df2.sort_values(by='Reranked_scores', ascending=False)
```

```
top_3_rerank_query2[:3]
```

```
[66]:
```

	Metadatas	Documents	Distances	IDs	Reranked_scores
0	{'Page_No.': 'Page 24', 'Policy_Name': 'Princi...'}	The Principal may terminate the Policyholder'...	0.324605	21	8.025837
2	{'Page_No.': 'Page 23', 'Policy_Name': 'Princi...'}	Section C - Policy Termination Article 1 - Fai...	0.438009	20	7.518888
1	{'Page_No.': 'Page 16', 'Policy_Name': 'Princi...'}	PART II - POLICY ADMINISTRATION Section A - Co...	0.435124	13	4.941992

```
[67]: top_3_RAG_query2 = top_3_rerank_query2[["Documents", "Metadatas"]][:3]
```

```
top_3_RAG_query2
```

```
[67]:
```

	Documents	Metadatas
0	The Principal may terminate the Policyholder'...	{'Page_No.': 'Page 24', 'Policy_Name': 'Princi...'}
2	Section C - Policy Termination Article 1 - Fai...	{'Page_No.': 'Page 23', 'Policy_Name': 'Princi...'}
1	PART II - POLICY ADMINISTRATION Section A - Co...	{'Page_No.': 'Page 16', 'Policy_Name': 'Princi...'}

```
[78]: # Generate the response - For Query 3
response3 = generate_response(query3, top_3_RAG_query3)
print("-"*80, "\n", "-"*78)
print("Query 3: ", query3)
print("-"*80, "\n", "-"*78, "\n")

# Print the response
print("\n".join(response3))
```

Query 3: What are the policy exclusions under Accidental Death insurance?

None of the provided documents contain relevant details to answer your query regarding policy exclusions under Accidental Death insurance. The documents discuss policy terminations, eligibility, and benefits, but do not list specific exclusions.

```
[71]: print("Third Query :: ", query3 , "\n")
```

Third Query :: What are the policy exclusions under Accidental Death insurance?

```
[72]: # Return the top 3 results from semantic search
top_3_semantic_query3 = results_df3.sort_values(by='Distances')
top_3_semantic_query3[:3]
```

	IDs	Documents	Distances	Metadatas	Reranked_scores
0	4	Section A – Eligibility Member Life Insurance ...	0.5230893531756438	{'Page_No.': 'Page 7', 'Policy_Name': 'Princip...	-1.210638
1	5	Section A - Member Life Insurance Schedule of ...	0.5339254244021225	{'Page_No.': 'Page 8', 'Policy_Name': 'Princip...	-1.679972
2	32	Section C - Individual Terminations Article 1 ...	0.5703461560200235	{'Page_No.': 'Page 35', 'Policy_Name': 'Princi...	0.403215

```
[73]: # Return the top 3 results after reranking
top_3_rerank_query3 = results_df3.sort_values(by='Reranked_scores', ascending=False)
top_3_rerank_query3[:3]
```

	IDs	Documents	Distances	Metadatas	Reranked_scores
2	32	Section C - Individual Terminations Article 1 ...	0.5703461560200235	{'Page_No.': 'Page 35', 'Policy_Name': 'Princi...	0.403215
8	52	Exposure Exposure to the elements will be pres...	0.6161296850710246	{'Page_No.': 'Page 55', 'Policy_Name': 'Princi...	0.032372
6	23	PART III - INDIVIDUAL REQUIREMENTS AND RIGHTS ...	0.5985395633181447	{'Page_No.': 'Page 26', 'Policy_Name': 'Princi...	-0.208070

```
[74]: top_3_RAG_query3 = top_3_rerank_query3[["Documents", "Metadatas"]][:3]
```

top_3_RAG_query3

	Documents	Metadatas
2	Section C - Individual Terminations Article 1 ...	{'Page_No.': 'Page 35', 'Policy_Name': 'Princi...
8	Exposure Exposure to the elements will be pres...	{'Page_No.': 'Page 55', 'Policy_Name': 'Princi...
6	PART III - INDIVIDUAL REQUIREMENTS AND RIGHTS ...	{'Page_No.': 'Page 26', 'Policy_Name': 'Princi...