

## Case 1: Entity Analysis

**Base:** Karla, an old hawk, lived at the top of a tall oak tree. One afternoon, she saw a hunter on the ground with a bow and some crude arrows that had no feathers. The hunter took aim and shot at the hawk but missed. Karla knew the hunter wanted her feathers so she glided down to the hunter and offered to give him a few. The hunter was so grateful that he pledged never to shoot at a hawk again. He went off and shot deer instead.

**Target:** Once there was a small country called Zerdia that learned to make the world's smartest computer. One day Zerdia was attacked by its warlike neighbor, Gagrach. But the missiles were badly aimed and the attack failed. The Zerdian government realized that Gagrach wanted Zerdian computers so it offered to sell some of its computers to the country. The government of Gagrach was very pleased. It promised never to attack Zerdia again.

**Ground Truth:** True Analogy

**Answers:**

**From LLAMA3.1-8B:**

- In the Base, the main characters are a hawk and a hunter. The hawk, aware of the hunter's intentions, offers to give the hunter some of its feathers, and the hunter agrees to never harm hawks again.

- In the Target, the main characters are a country called Zerdia and its warlike neighbor, Gagrach. Zerdia, aware of Gagrach's intentions, offers to sell some of its computers, and Gagrach agrees to never attack Zerdia again.

Therefore, specific background setting (a hawk and a hunter versus a country and its neighbor) are not similar: the context of the stories differ. The character roles and responsibilities (hawk and hunter, Zerdia and Gagrach) are also not similar: the hawk and hunter are in a transactional relationship, while Zerdia and Gagrach are in a conflict relationship. However, there is a certain similarity in the plot progression and dynamics, as both stories involve a conflict leading to a peaceful resolution. Additionally, there are no common words.

In summary,

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": []
}
```

**From LLAMA3.1-70B:**

- In the Base, the main character is Karla, an old hawk, who lives in a tall oak tree and encounters a hunter who wants her feathers. The hawk offers the hunter some feathers, and the hunter agrees to never shoot at hawks again.

- In the Target, the main character is the country of Zerdia, which possesses the world's smartest computer and is attacked by its neighbor, Gagrach. Zerdia offers to sell some computers to Gagrach, and Gagrach promises to never attack Zerdia again.

Therefore, specific background setting (a hawk and a hunter versus a country and its neighbor) are different: a natural setting differs from a geopolitical setting. The character roles and responsibilities (hawk and hunter, country and neighbor) are also different: the hawk and hunter are in a predator-prey relationship, while the countries are in a diplomatic relationship. However, there is a certain similarity in the plot progression and dynamics, as both stories involve an initial conflict, a realization of the opponent's desire, and a resolution through offering what the opponent wants. Additionally, there are no common words.

In summary,

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": []
}
```

**From GPT-4o:**

- In the Base, the main characters are Karla, an old hawk, and a hunter. The hunter attempts to shoot the hawk but misses. The hawk offers her feathers to the hunter, who then pledges not to shoot hawks again.

- In the Target, the main characters are the country Zerdia and its warlike neighbor, Gagrach. Gagrach attacks Zerdia but fails. Zerdia offers to sell its computers to Gagrach, which then promises not to attack Zerdia again.

Therefore, the specific background settings (hawk and hunter versus countries in conflict) are different: an animal interaction differs from international relations. The character roles and responsibilities (hawk and hunter, Zerdia and Gagrach) are also different: the hawk and hunter are in a predator-prey relationship, while Zerdia and Gagrach are in a geopolitical conflict. However, there is a similarity in the plot progression and dynamics, as both stories involve an initial conflict that is resolved through a peaceful offering. Additionally, there are no common words.

In summary,

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": []
}
```

**From Qwen2.5-72B:**

- In the Base, the main characters are Karla, an old hawk, and a hunter. The hunter, aiming to get hawk feathers, misses his shot, and Karla offers him some feathers, leading to the hunter's promise to never shoot at a hawk again.

- In the Target, the main characters are the country of Zerdia and its neighbor, Gagrach. Gagrach, aiming to get Zerdian computers, launches a failed attack, and Zerdia offers to sell some computers, leading to Gagrach's promise to never attack Zerdia again.

Therefore, specific background settings (a hawk and a hunter versus two countries) are different: one is a natural setting, the other is a geopolitical setting. The character roles and responsibilities (hawk and hunter, countries and their governments) are also different: the hawk and hunter are in a predator-prey relationship, while the countries are in a conflict-resolution relationship. However, there is a certain similarity in the plot progression and dynamics, as both stories involve an initial conflict leading to a peaceful resolution. Additionally, there are no common words.

In summary,

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": []
}
```

**Case 1: Sentence Mapping**

**Base:** Karla, an old hawk, lived at the top of a tall oak tree. One afternoon, she saw a hunter on the ground with a bow and some crude arrows that had no feathers. The hunter took aim and shot at the hawk but missed. Karla knew the hunter wanted her feathers so she glided down to the hunter and offered to give him a few. The hunter was so grateful that he pledged never to shoot at a hawk again. He went off and shot deer instead.

**Target:** Once there was a small country called Zerdia that learned to make the world's smartest computer. One day Zerdia was attacked by its warlike neighbor, Gagrach. But the missiles were badly aimed and the attack failed. The Zerdian government realized that Gagrach wanted Zerdian computers so it offered to sell some of its computers to the country. The government of Gagrach was very pleased. It promised never to attack Zerdia again.

**Ground Truth:** True Analogy

**Answers:****From LLAMA3.1-8B:**

1. Base: There was a turtle and a rabbit who decided to have a race. vs. Target: None.
2. Base: Rabbit believed he would definitely win because he ran much faster than the turtle. vs. Target: There was a thief who always managed to escape the police because he ran very fast.
3. Base: Once the race started, the rabbit quickly rushed to the front while the turtle crawled slowly. vs. Target: None.
4. Base: Along the way, the rabbit felt he was running too fast and the finish line was still far away, so he decided to rest under a tree for a while. vs. Target: One day, the police pretended to conduct extensive patrols in one place, but in reality, they quietly lay in wait on another path.
5. Base: He fell asleep, but the turtle kept crawling forward. vs. Target: As usual, after stealing something, the thief ran swiftly, but along the way, he was hit by a suddenly appearing car and knocked unconscious, then sent to the hospital.
6. Base: In the end, when the rabbit woke up, he found that the turtle had already crossed the finish line and won the race. vs. Target: In the end, when the thief woke up, he found himself surrounded by police.

**//repeat prompt**

1. Base: Karla, an old hawk, lived at the top of a tall oak tree. vs. Target: None.
2. Base: One afternoon, she saw a hunter on the ground with a bow and some crude arrows that had no feathers. vs. Target: None.
3. Base: The hunter took aim and shot at the hawk but missed. vs. Target: But the missiles were badly aimed and the attack failed.
4. Base: Karla knew the hunter wanted her feathers so she glided down to the hunter and offered to give him a few. vs. Target: The Zerdian government realized that Gagrach wanted Zerdian computers so it offered to sell some of its computers to the country.
5. Base: The hunter was so grateful that he pledged never to shoot at a hawk again. vs. Target: The government of Gagrach was very pleased.
6. Base: He went off and shot deer instead. vs. Target: It promised never to attack Zerdia again.

**From LLAMA3.1-70B:**

1. Base: Karla, an old hawk, lived at the top of a tall oak tree. vs. Target: Once there was a small country called Zerdia that learned to make the world's smartest computer.
2. Base: One afternoon, she saw a hunter on the ground with a bow and some crude arrows that had no feathers. vs. Target: One day Zerdia was attacked by its warlike neighbor, Gagrach.
3. Base: The hunter took aim and shot at the hawk but missed. vs. Target: But the missiles were badly aimed and the attack failed.
4. Base: Karla knew the hunter wanted her feathers so she glided down to the hunter and offered to give him a few. vs. Target: The Zerdian government realized that Gagrach wanted Zerdian computers so it offered to sell some of its computers to the country.

5. Base: The hunter was so grateful that he pledged never to shoot at a hawk again. vs. Target: The government of Gagrach was very pleased. It promised never to attack Zerdia again.
6. Base: He went off and shot deer instead. vs. Target: None.

**From GPT-4o:**

1. Base: Karla, an old hawk, lived at the top of a tall oak tree. vs. Target: Once there was a small country called Zerdia that learned to make the world's smartest computer.
2. Base: One afternoon, she saw a hunter on the ground with a bow and some crude arrows that had no feathers. vs. Target: One day Zerdia was attacked by its warlike neighbor, Gagrach.
3. Base: The hunter took aim and shot at the hawk but missed. vs. Target: But the missiles were badly aimed and the attack failed.
4. Base: Karla knew the hunter wanted her feathers so she glided down to the hunter and offered to give him a few. vs. Target: The Zerdian government realized that Gagrach wanted Zerdian computers so it offered to sell some of its computers to the country.
5. Base: The hunter was so grateful that he pledged never to shoot at a hawk again. vs. Target: The government of Gagrach was very pleased.
6. Base: He went off and shot deer instead. vs. Target: It promised never to attack Zerdia again.

**From Qwen2.5-72B:**

1. Base: Karla, an old hawk, lived at the top of a tall oak tree. vs. Target: Once there was a small country called Zerdia that learned to make the world's smartest computer.
2. Base: One afternoon, she saw a hunter on the ground with a bow and some crude arrows that had no feathers. vs. Target: One day Zerdia was attacked by its warlike neighbor, Gagrach.
3. Base: The hunter took aim and shot at the hawk but missed. vs. Target: But the missiles were badly aimed and the attack failed.
4. Base: Karla knew the hunter wanted her feathers so she glided down to the hunter and offered to give him a few. vs. Target: The Zerdian government realized that Gagrach wanted Zerdian computers so it offered to sell some of its computers to the country.
5. Base: The hunter was so grateful that he pledged never to shoot at a hawk again. vs. Target: The government of Gagrach was very pleased. It promised never to attack Zerdia again.
6. Base: He went off and shot deer instead. vs. Target: None.

**Case 1: Relational Alignment**

**Base:** Karla, an old hawk, lived at the top of a tall oak tree. One afternoon, she saw a hunter on the ground with a bow and some crude arrows that had no feathers. The hunter took aim and shot at the hawk but missed. Karla knew the hunter wanted her feathers so she glided down to the hunter and offered to give him a few. The hunter was so grateful that he pledged never to shoot at a hawk again. He went off and shot deer instead.

**Target:** Once there was a small country called Zerdia that learned to make the world's smartest computer. One day Zerdia was attacked by its warlike neighbor, Gagrach. But the missiles were badly aimed and the attack failed. The Zerdian government realized that Gagrach wanted Zerdian computers so it offered to sell some of its computers to the country. The government of Gagrach was very pleased. It promised never to attack Zerdia again.

**Ground Truth:** True Analogy

**Answers:**

**From LLAMA3.1-8B:**

1. Base: Karla, an old hawk, lived at the top of a tall oak tree. vs. Target: None.  
Classification: Irrelevant Group
2. Base: One afternoon, she saw a hunter on the ground with a bow and some crude arrows that had no feathers. vs. Target: None.  
Classification: Irrelevant Group
3. Base: The hunter took aim and shot at the hawk but missed. vs. Target: But the missiles were badly aimed and the attack failed.  
Classification: Similar Group
4. Base: Karla knew the hunter wanted her feathers so she glided down to the hunter and offered to give him a few. vs. Target: The Zerdian government realized that Gagrach wanted Zerdian computers so it offered to sell some of its computers to the country.  
Classification: Similar Group
5. Base: The hunter was so grateful that he pledged never to shoot at a hawk again. vs. Target: The government of Gagrach was very pleased.  
Classification: Similar Group
6. Base: He went off and shot deer instead. vs. Target: It promised never to attack Zerdia again.  
Classification: Similar Group
- Summary:

Similar Group: [3, 4, 5, 6]

Dissimilar Group: []

Irrelevant Group: [1, 2]

**From LLAMA3.1-70B:**

1. In Base, it describes the hawk's living environment, while in Target, it describes the country's achievement. The roles described by the two are not corresponding in structure mapping, so it is classified as an irrelevant group.
2. In Base, the hawk observes the hunter, while in Target, the country is attacked by its neighbor. Both depict the main character being aware of a potential threat, so it is classified as a similar group.
3. In Base, the hunter's attack fails, while in Target, the missiles are badly aimed and the attack fails. Both describe the initial attack being unsuccessful, so it is classified as a similar group.
4. In Base, the hawk offers its feathers to the hunter, while in Target, the country offers to sell its computers to the neighbor. Both depict the main character offering something to the potential threat, so it is classified as a similar group.
5. In Base, the hunter is grateful and promises not to shoot at the hawk again, while in Target, the government is pleased and promises not to attack the country again. Both describe the potential threat being satisfied and making a promise, so it is classified as a similar group.
6. Because one side (Target) contains 'None', it is classified as an irrelevant group.

In summary,

Similar Group: [2, 3, 4, 5]

Dissimilar Group: []

Irrelevant Group: [1, 6]

**From GPT-4o:**

1. Both describe the initial setting and main character(s): Karla, an old hawk, and Zerdia, a small country. Both are classified as a similar group.
2. Both describe an antagonist preparing to attack: the hunter with a bow and arrows, and Gagrach attacking Zerdia. Both are classified as a similar group.
3. Both describe the antagonist's attack failing: the hunter missing the hawk, and Gagrach's missiles being badly aimed. Both are classified as a similar group.
4. Both describe the protagonist realizing the antagonist's intentions and offering a solution: Karla offering feathers, and Zerdia offering computers. Both are classified as a similar group.
5. Both describe the antagonist's reaction to the protagonist's offer: the hunter being grateful, and Gagrach being pleased. Both are classified as a similar group.
6. Both describe the antagonist's change in behavior: the hunter shooting deer instead, and Gagrach promising not to attack Zerdia again. Both are classified as a similar group.

In summary,

Similar Group: [1, 2, 3, 4, 5, 6]

Dissimilar Group: []

Irrelevant Group: []

**From Qwen2.5-72B:**

1. In the Base, Karla is an old hawk living in a tall oak tree, corresponding to Zerdia, a small country that learned to make the world's smartest computer. Both describe the main character or entity and their unique attribute, classified as a similar group.
2. In the Base, the hunter is seen with a bow and crude arrows, corresponding to Gagrach attacking Zerdia with missiles. Both describe an adversary with a weapon or attack, classified as a similar group.
3. In the Base, the hunter misses the hawk, corresponding to Gagrach's missiles failing to hit Zerdia. Both describe the failure of the attack, classified as a similar group.
4. In the Base, Karla offers feathers to the hunter, corresponding to Zerdia offering computers to Gagrach. Both describe the main character or entity offering something valuable to the adversary, classified as a similar group.
5. In the Base, the hunter pledges never to shoot at a hawk again, corresponding to Gagrach promising never to attack Zerdia again. Both describe the adversary making a promise to not repeat the hostile action, classified as a similar group.
6. Because one side (Target) contains 'None', it is classified as an irrelevant group.

In summary,

Similar Group: [1, 2, 3, 4, 5]

Dissimilar Group: []

Irrelevant Group: [6]

**Case 1: Analogical Conclusion**

**Base:** Karla, an old hawk, lived at the top of a tall oak tree. One afternoon, she saw a hunter on the ground with a bow and some crude arrows that had no feathers. The hunter took aim and shot at the hawk but missed. Karla knew the hunter wanted her feathers so she glided down to the hunter and offered to give him a few. The hunter was so grateful that he pledged never to shoot at a hawk again. He went off and shot deer instead.

**Target:** Once there was a small country called Zerdia that learned to make the world's smartest computer. One day Zerdia was attacked by its warlike neighbor, Gagrach. But the missiles were badly aimed and the attack failed. The Zerdian government realized that Gagrach wanted Zerdian computers so it offered to sell some of its computers to the country. The government of Gagrach was very pleased. It promised never to attack Zerdia again.

**Ground Truth:** True Analogy

**Answers:**

**From LLAMA3.1-8B:**

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": "0",
  "similar-set count": "4",
  "dissimilar-set count": "0",
  "irrelevant-set count": "2",
  "entities": "dissimilar",
  "one-order relations": "similar",
  "higher-order relations": "similar",
  "predict_label": "True Analogy"
}
```

**From LLAMA3.1-70B:**

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": "0",
  "similar-set count": "4",
  "dissimilar-set count": "0",
  "irrelevant-set count": "2",
  "entities": "dissimilar",
  "one-order relations": "similar",
  "higher-order relations": "similar",
  "predict_label": "True Analogy"
}
```

**From GPT-4o:**

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": "0",
  "similar-set count": "6",
  "dissimilar-set count": "0",
  "irrelevant-set count": "0",
  "entities": "dissimilar",
  "one-order relations": "similar",
  "higher-order relations": "similar",
  "predict_label": "True Analogy"
}
```

**From Qwen2.5-72B:**

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": "0",
  "similar-set count": "5",
  "dissimilar-set count": "0",
  "irrelevant-set count": "2",
  "entities": "dissimilar",
  "one-order relations": "similar",
  "higher-order relations": "similar",
  "predict_label": "True Analogy"
}
```

**Case 2: Entity Analysis**

**Base:** Morris was a simple-minded prisoner who loved to play the harmonica at night. Finally, his cellmate got tired of this and demanded that he shut up. He should always play during the day, the cellmate insisted. The next night, Morris escaped from prison and hid in a boxcar. But then Morris remembered that his cellmate said he should play harmonica every day, so he started playing. Immediately, Morris was nabbed by the cops. Poor, simple-minded Morris wished he hadn't paid any

attention to his cellmate. Back in his cell, he devoted himself to covering the walls with obscenities.

**Target:** A little girl named Jenny wished she could run away from home. She loved to play with her dog every day, but only in her neighbor's yard. Eventually, her neighbor got fed-up and told her to always play in her own yard. But Jenny refused to listen because she thought it was bad luck to play in her own yard. The last time she did it her mother caught her right away and made her go to work.

**Ground Truth:** False Analogy

**Answers:**

**From LLAMA3.1-8B:**

- In the Base, the main characters are a prisoner named Morris and his cellmate. Morris, who loves to play the harmonica, escapes from prison but is caught again after playing his harmonica in a boxcar. He then returns to his cell and covers the walls with obscenities.

- In the Target, the main characters are a little girl named Jenny and her neighbor. Jenny wants to play with her dog in her neighbor's yard, but her neighbor tells her to play in her own yard. Jenny refuses to listen and gets caught by her mother. Therefore, specific background setting (a prisoner in a cell versus a little girl at home) are not similar: the settings differ significantly. The character roles and responsibilities (prisoner and cellmate, little girl and neighbor) are also not similar: the prisoner and cellmate are in a competitive relationship, while the little girl and neighbor are in a relationship where the neighbor is giving instructions. However, there is a certain similarity in the plot progression and dynamics, as both stories involve a character being told to do something and then doing it, leading to negative consequences. Additionally, there are no common words.

In summary,

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": []
}
```

**From LLAMA3.1-70B:**

- In the Base, the main character is a prisoner named Morris who loves to play the harmonica. His cellmate demands that he play during the day, and Morris's obedience to this rule ultimately leads to his recapture after escaping.

- In the Target, the main character is a little girl named Jenny who loves to play with her dog. Her neighbor tells her to play in her own yard, but Jenny disobeys, believing it's bad luck, and gets caught by her mother.

The specific background settings (prison life versus a child's play) are different: one is a confined environment, while the other is a domestic setting. The character roles and responsibilities (prisoner and cellmate, child and neighbor) are also different: the prisoner and cellmate are in a confined relationship, while the child and neighbor are in an advisory relationship. However, there is a certain similarity in the plot progression and dynamics, as both stories involve a character's obedience or disobedience to advice leading to an undesirable outcome. Additionally, there are no common words.

In summary,

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": []
}
```

**From GPT-4o:**

- In the Base, the main characters are Morris, a simple-minded prisoner who loves to play the harmonica, and his cellmate who gets tired of the noise. Morris escapes but gets caught because he plays the harmonica as his cellmate suggested.

- In the Target, the main characters are Jenny, a little girl who loves to play with her dog, and her neighbor who gets fed up with her playing in his yard. Jenny refuses to play in her own yard due to superstition and gets caught by her mother.

Therefore, specific background settings (prison versus home/neighborhood) are different: prison life differs from a child's home life. The character roles and responsibilities (prisoner and cellmate, girl and neighbor) are also different: the prisoner and cellmate have a conflict over noise, while the girl and neighbor have a conflict over play location. However, there is a certain similarity in the plot progression and dynamics, as both stories involve a character ignoring advice and facing consequences. Additionally, there are no common words.

In summary,

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": []
}
```

**From Qwen2.5-72B:**

- In the Base, the main characters are Morris, a simple-minded prisoner, and his cellmate. Morris is often playing the harmonica at night, which annoys his cellmate. After escaping, Morris follows his cellmate's advice to play during the day, leading to his capture. Back in prison, he vents his frustration by covering the walls with obscenities.



- In the Target, the main characters are Jenny, a little girl, and her neighbor. Jenny loves to play with her dog in her neighbor's yard, which annoys the neighbor. Despite the neighbor's advice to play in her own yard, Jenny refuses, believing it is bad luck. Eventually, her mother catches her and makes her go to work.

Therefore, specific background settings (prison escape versus a child playing in a neighbor's yard) are different: one is a criminal scenario, the other a domestic situation. The character roles and responsibilities (prisoner and cellmate, child and neighbor) are also different: the prisoner and cellmate are in a confined, adversarial relationship, while the child and neighbor are in a community setting. However, there is a certain similarity in the plot progression and dynamics, as both stories involve a character ignoring or following advice, leading to a negative outcome. Additionally, there are no common words.

In summary,

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": []
}
```

## Case 2: Sentence Mapping

**Base:** Morris was a simple-minded prisoner who loved to play the harmonica at night. Finally, his cellmate got tired of this and demanded that he shut up. He should always play during the day, the cellmate insisted. The next night, Morris escaped from prison and hid in a boxcar. But then Morris remembered that his cellmate said he should play harmonica every day, so he started playing. Immediately, Morris was nabbed by the cops. Poor, simple-minded Morris wished he hadn't paid any attention to his cellmate. Back in his cell, he devoted himself to covering the walls with obscenities.

**Target:** A little girl named Jenny wished she could run away from home. She loved to play with her dog every day, but only in her neighbor's yard. Eventually, her neighbor got fed-up and told her to always play in her own yard. But Jenny refused to listen because she thought it was bad luck to play in her own yard. The last time she did it her mother caught her right away and made her go to work.

**Ground Truth:** False Analogy

**Answers:**

**From LLAMA3.1-8B:**

1. Base: Morris was a simple-minded prisoner who loved to play the harmonica at night. vs. Target: A little girl named Jenny wished she could run away from home.
2. Base: Finally, his cellmate got tired of this and demanded that he shut up. vs. Target: She loved to play with her dog every day, but only in her neighbor's yard.
3. Base: He should always play during the day, the cellmate insisted. vs. Target: Eventually, her neighbor got fed-up and told her to always play in her own yard.
4. Base: The next night, Morris escaped from prison and hid in a boxcar. vs. Target: But Jenny refused to listen because she thought it was bad luck to play in her own yard.
5. Base: But then Morris remembered that his cellmate said he should play harmonica every day, so he started playing. vs. Target: The last time she did it her mother caught her right away and made her go to work.
6. Base: Immediately, Morris was nabbed by the cops. vs. Target: None.
7. Base: Poor, simple-minded Morris wished he hadn't paid any attention to his cellmate. vs. Target: None.
8. Base: Back in his cell, he devoted himself to covering the walls with obscenities. vs. Target: None.

**From LLAMA3.1-70B:**

1. Base: Morris was a simple-minded prisoner who loved to play the harmonica at night. vs. Target: A little girl named Jenny wished she could run away from home.
2. Base: Finally, his cellmate got tired of this and demanded that he shut up. vs. Target: Eventually, her neighbor got fed-up and told her to always play in her own yard.
3. Base: He should always play during the day, the cellmate insisted. vs. Target: None.
4. Base: The next night, Morris escaped from prison and hid in a boxcar. vs. Target: None.
5. Base: But then Morris remembered that his cellmate said he should play harmonica every day, so he started playing. vs. Target: But Jenny refused to listen because she thought it was bad luck to play in her own yard.
6. Base: Immediately, Morris was nabbed by the cops. vs. Target: The last time she did it her mother caught her right away and made her go to work.
7. Base: Poor, simple-minded Morris wished he hadn't paid any attention to his cellmate. vs. Target: None.
8. Base: Back in his cell, he devoted himself to covering the walls with obscenities. vs. Target: None.

**From GPT-4o:**

1. Base: Morris was a simple-minded prisoner who loved to play the harmonica at night. vs. Target: A little girl named Jenny wished she could run away from home.
2. Base: Finally, his cellmate got tired of this and demanded that he shut up. vs. Target: She loved to play with her dog every day, but only in her neighbor's yard.
3. Base: He should always play during the day, the cellmate insisted. vs. Target: Eventually, her neighbor got fed-up and told her to always play in her own yard.

4. Base: The next night, Morris escaped from prison and hid in a boxcar. vs. Target: But Jenny refused to listen because she thought it was bad luck to play in her own yard.
5. Base: But then Morris remembered that his cellmate said he should play harmonica every day, so he started playing. vs. Target: The last time she did it her mother caught her right away and made her go to work.
6. Base: Immediately, Morris was nabbed by the cops. vs. Target: None.
7. Base: Poor, simple-minded Morris wished he hadn't paid any attention to his cellmate. vs. Target: None.
8. Base: Back in his cell, he devoted himself to covering the walls with obscenities. vs. Target: None.

**From Qwen2.5-72B:**

1. Base: Morris was a simple-minded prisoner who loved to play the harmonica at night. vs. Target: A little girl named Jenny wished she could run away from home.
2. Base: Finally, his cellmate got tired of this and demanded that he shut up. vs. Target: She loved to play with her dog every day, but only in her neighbor's yard.
3. Base: He should always play during the day, the cellmate insisted. vs. Target: Eventually, her neighbor got fed-up and told her to always play in her own yard.
4. Base: The next night, Morris escaped from prison and hid in a boxcar. vs. Target: But Jenny refused to listen because she thought it was bad luck to play in her own yard.
5. Base: But then Morris remembered that his cellmate said he should play harmonica every day, so he started playing. vs. Target: The last time she did it her mother caught her right away and made her go to work.
6. Base: Immediately, Morris was nabbed by the cops. vs. Target: None.
7. Base: Poor, simple-minded Morris wished he hadn't paid any attention to his cellmate. vs. Target: None.
8. Base: Back in his cell, he devoted himself to covering the walls with obscenities. vs. Target: None.

**Case 2: Relational Alignment**

**Base:** Morris was a simple-minded prisoner who loved to play the harmonica at night. Finally, his cellmate got tired of this and demanded that he shut up. He should always play during the day, the cellmate insisted. The next night, Morris escaped from prison and hid in a boxcar. But then Morris remembered that his cellmate said he should play harmonica every day, so he started playing. Immediately, Morris was nabbed by the cops. Poor, simple-minded Morris wished he hadn't paid any attention to his cellmate. Back in his cell, he devoted himself to covering the walls with obscenities.

**Target:** A little girl named Jenny wished she could run away from home. She loved to play with her dog every day, but only in her neighbor's yard. Eventually, her neighbor got fed-up and told her to always play in her own yard. But Jenny refused to listen because she thought it was bad luck to play in her own yard. The last time she did it her mother caught her right away and made her go to work.

**Ground Truth:** False Analogy

**Answers:**

**From LLAMA3.1-8B:**

1. Base: Morris was a simple-minded prisoner who loved to play the harmonica at night. vs. Target: A little girl named Jenny wished she could run away from home.

Analysis: Both describe the main character having a desire or tendency that is not aligned with the expectations of others. Morris wants to play the harmonica at night, while Jenny wants to play in her neighbor's yard. This is classified as a similar group.

2. Base: Finally, his cellmate got tired of this and demanded that he shut up. vs. Target: She loved to play with her dog every day, but only in her neighbor's yard.

Analysis: The cellmate's demand is a reaction to Morris's harmonica playing, while the neighbor's demand is a reaction to Jenny playing in their yard. However, the cellmate's demand is a direct cause of Morris's change in behavior, whereas the neighbor's demand is not directly related to Jenny's behavior. This is classified as an irrelevant group.

3. Base: He should always play during the day, the cellmate insisted. vs. Target: Eventually, her neighbor got fed-up and told her to always play in her own yard.

Analysis: Both describe a character giving advice or making a demand that is not directly related to the main character's behavior. However, the cellmate's advice is a direct cause of Morris's change in behavior, while the neighbor's demand is not directly related to Jenny's behavior. This is classified as an irrelevant group.

4. Base: The next night, Morris escaped from prison and hid in a boxcar. vs. Target: But Jenny refused to listen because she thought it was bad luck to play in her own yard.

Analysis: Morris's escape is a direct result of his desire to play the harmonica, while Jenny's refusal to listen is a result of her own superstition. However, both characters are making decisions based on their own desires or beliefs, which is classified as a similar group.

5. Base: But then Morris remembered that his cellmate said he should play harmonica every day, so he started playing. vs. Target: The last time she did it her mother caught her right away and made her go to work.

Analysis: Morris's decision to play the harmonica is a direct result of his cellmate's advice, while Jenny's punishment is a result of her own disobedience. However, both characters are facing consequences for their actions, which is classified as a similar group.

6. Base: Immediately, Morris was nabbed by the cops. vs. Target: None.

Analysis: This is classified as an irrelevant group because there is no corresponding statement in the Target.

7. Base: Poor, simple-minded Morris wished he hadn't paid any attention to his cellmate. vs. Target: None.

Analysis: This is classified as an irrelevant group because there is no corresponding statement in the Target.

8. Base: Back in his cell, he devoted himself to covering the walls with obscenities. vs. Target: None.



Analysis: This is classified as an irrelevant group because there is no corresponding statement in the Target.

Summary:

Similar Group: [1, 4, 5]

Dissimilar Group: []

Irrelevant Group: [2, 3, 6, 7, 8]

**From LLAMA3.1-70B:**

1. Because one side (Target) does not describe the main character's hobby or behavior, it is classified as an irrelevant group.
2. In Base, the cellmate is fed up with Morris's nighttime harmonica playing, while in Target, the neighbor is fed up with Jenny playing in their yard. Both describe a character getting tired of the main character's behavior, classified as a similar group.
3. Because one side (Target) contains 'None', it is classified as an irrelevant group.
4. Because one side (Target) contains 'None', it is classified as an irrelevant group.
5. In Base, Morris follows his cellmate's advice and plays the harmonica during the day, while in Target, Jenny refuses to follow her neighbor's advice to play in her own yard. Both describe the main character's decision regarding someone else's advice, but the actions are opposite, so it is classified as a dissimilar group.
6. In Base, Morris is caught by the police after playing the harmonica, while in Target, Jenny is caught by her mother after playing in her own yard. Both describe the main character getting caught after making a decision, classified as a similar group.
7. Because one side (Target) contains 'None', it is classified as an irrelevant group.
8. Because one side (Target) contains 'None', it is classified as an irrelevant group.

In summary,

Similar Group: [2, 6]

Dissimilar Group: [5]

Irrelevant Group: [1, 3, 4, 7, 8]

**From GPT-4o:**

1. Because one side (Target) contains 'None', it is classified as an irrelevant group.
2. In the Base, Morris's cellmate gets tired of his harmonica playing and demands he stop, corresponding to the Target where Jenny's neighbor gets fed up with her playing in their yard. Both describe someone getting annoyed and demanding a change in behavior, classified as a similar group.
3. In the Base, the cellmate insists Morris should play during the day, while in the Target, the neighbor insists Jenny should play in her own yard. Both involve someone imposing a restriction on the protagonist's behavior, classified as a similar group.
4. In the Base, Morris escapes and hides, while in the Target, Jenny refuses to listen because of her belief. Both describe the protagonists taking actions based on their beliefs or decisions, classified as a similar group.
5. In the Base, Morris remembers his cellmate's advice and starts playing the harmonica, leading to his capture. In the Target, Jenny's previous experience of being caught by her mother when playing in her own yard is mentioned. Both describe the protagonists facing consequences due to their actions, classified as a similar group.
6. Because one side (Target) contains 'None', it is classified as an irrelevant group.
7. Because one side (Target) contains 'None', it is classified as an irrelevant group.
8. Because one side (Target) contains 'None', it is classified as an irrelevant group.

In summary,

Similar Group: [2, 3, 4, 5]

Dissimilar Group: []

Irrelevant Group: [1, 6, 7, 8]

**From Qwen2.5-72B:**

1. Because one side (Target) describes a wish to run away, while the other (Base) describes a habitual action, they are not directly aligned in structure. Therefore, it is classified as an irrelevant group.
2. In the Base, the cellmate gets tired of Morris playing the harmonica at night, while in the Target, the neighbor gets tired of Jenny playing with her dog in the neighbor's yard. Both describe a character getting annoyed by another's repetitive action, classified as a similar group.
3. In the Base, the cellmate insists Morris should play during the day, while in the Target, the neighbor tells Jenny to play in her own yard. Both describe a character giving a directive to change the behavior, classified as a similar group.
4. In the Base, Morris escapes from prison and hides in a boxcar, while in the Target, Jenny refuses to listen to the neighbor because she believes it's bad luck. The actions and reasons are different, so it is classified as a dissimilar group.
5. In the Base, Morris starts playing the harmonica because he remembers the cellmate's directive, while in the Target, Jenny is caught by her mother for playing in the neighbor's yard. Both describe the main character facing consequences due to following or not following a directive, but the specific actions and outcomes are different, so it is classified as a dissimilar group.
6. Because one side (Target) contains 'None', it is classified as an irrelevant group.
7. Because one side (Target) contains 'None', it is classified as an irrelevant group.
8. Because one side (Target) contains 'None', it is classified as an irrelevant group.

In summary,

Similar Group: [2, 3]

Dissimilar Group: [4, 5]

Irrelevant Group: [1, 6, 7, 8]

## Case 2: Analogical Conclusion

**Base:** Morris was a simple-minded prisoner who loved to play the harmonica at night. Finally, his cellmate got tired of this and demanded that he shut up. He should always play during the day, the cellmate insisted. The next night, Morris escaped from prison and hid in a boxcar. But then Morris remembered that his cellmate said he should play harmonica every day, so he started playing. Immediately, Morris was nabbed by the cops. Poor, simple-minded Morris wished he hadn't paid any attention to his cellmate. Back in his cell, he devoted himself to covering the walls with obscenities.

**Target:** A little girl named Jenny wished she could run away from home. She loved to play with her dog every day, but only in her neighbor's yard. Eventually, her neighbor got fed-up and told her to always play in her own yard. But Jenny refused to listen because she thought it was bad luck to play in her own yard. The last time she did it her mother caught her right away and made her go to work.

**Ground Truth:** False Analogy

**Answers:**

**From LLAMA3.1-8B:**

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": "0",
  "similar-set count": "3",
  "dissimilar-set count": "0",
  "irrelevant-set count": "5",
  "entities": "dissimilar",
  "one-order relations": "similar",
  "higher-order relations": "similar",
  "predict_label": "True Analogy"
}
```

**From LLAMA3.1-70B:**

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": "0",
  "similar-set count": "2",
  "dissimilar-set count": "1",
  "irrelevant-set count": "5",
  "entities": "dissimilar",
  "one-order relations": "similar",
  "higher-order relations": "dissimilar",
  "predict_label": "False Analogy"
}
```

**From GPT-4o:**

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": "0",
  "similar-set count": "4",
  "dissimilar-set count": "0",
  "irrelevant-set count": "4",
  "entities": "dissimilar",
  "one-order relations": "similar",
  "higher-order relations": "similar",
  "predict_label": "True Analogy"
}
```

**From Qwen2.5-72B:**

```
{
  "background": "False",
  "role": "False",
  "plot": "True",
  "common-words count": "0",
  "similar-set count": "2",
  "dissimilar-set count": "2",
  "irrelevant-set count": "4",
}
```

```
"entities": "dissimilar",  
"one-order relations": "similar",  
"higher-order relations": "dissimilar",  
"predict_label": "False Analogy"  
}
```