Unpacking the content descriptions in the Reasoning strand,
Critical and Creative Thinking

Foundation to Level 6

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Introduction

This document contains key concepts and ideas to unpack the Foundation to Level 6 Reasoning strand content descriptions from Critical and Creative Thinking. The sample learning activities that are listed could be used to support explicit teaching and/or consolidation of learning. An indicative achievement standard extract has been given but, depending on the context of the reasoning in the activity, other achievement standard extracts may be relevant.

Foundation to Levels 2

**Content description:** Examine words that show reasons and words that show conclusions [(VCCCTR004)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR004)

**Relevant achievement standard extract:** By the end of Level 2, students … identify words that indicate components of a point of view.

Sample key concepts and ideas:

* Holding a point of view can mean a few different things, for example, expressing an opinion.
* When we want to say *why* we hold an opinion, we provide a reason. We can show a reason through the use of a word like ‘because’ or phrases like ‘for the reason that’ or ‘due to’.
* A conclusion is what we judge to be the case as a consequence of other statements in our point of view.
* We can show a conclusion through use of words such as ‘therefore’, ‘so’ and ‘then’, or phrases such as ‘as a result’ or ‘for that/this reason’.

Sample learning activity:

Students discuss their feelings with a peer about a recently read story. One student expresses their feeling about the story followed by their reason and the other student expresses their reason followed by the feeling. Students reflect on the different words and phrases that they heard.

**Content description:** Compare and contrast information and ideas in own and others’ reasoning [(VCCCTR005)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR005)

**Relevant achievement standard extract:** [Students] use reasons and examples for different purposes.

Sample key concepts and ideas:

* Investigating a question or topic should involve seeing whether there are similarities and differences in ideas and information among other people or groups interested in the topic. This can help us to think more broadly or deeply about the topic.
* We can use reasons and examples to develop an explanation of similarities and differences.

Sample learning activity:

As part of an inquiry – for example, when investigating views on special and important places in the local community or inquiring into how science is used in our daily lives – students identify similarities and differences in their information and ideas, using reasons and examples to do so. Students reflect on what they learnt as a result of doing this.

**Content description:** Consider how reasons and examples are used to support a point of view and illustrate meaning [(VCCCTR006)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR006)

**Relevant achievement standard extract:** [Students] use reasons and examples for different purposes.

Sample key concepts and ideas:

* Examples can be used to illustrate a general statement. For example, we might show what we mean by multiplication being repeated addition through the use of examples.
* Sometimes more than one example might be required; for example, simply providing ‘dog’ as an example to illustrate what is meant by a pet would not be enough because pets are a broad category.
* Examples can also be used as evidence to help establish the truth of a statement.
* Providing a reason can help us decide whether we want to accept a statement.
* Providing reasons and examples can help to reveal areas of agreement and disagreement between different points of view.

Sample learning activity:

In small groups, students are required to reach consensus, for example, on which game to play or which instrument to use to explore a musical idea. They experiment first with expressing their preference without reasons or examples and then expressing it with reasons and examples, and they reflect on the different results and the role that examples and reasons play in helping to reach consensus.

Levels 3 and 4

**C****ontent description:** Examine and use the structure of a basic argument, with an aim, reasons and conclusion to present a point of view [(VCCCTR013)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR013)

**Relevant achievement standard extract:** By the end of Level 4, students … describe and structure arguments with clearly identified aims, premises and conclusions. They use and explain a range of strategies to develop their arguments.

Sample key concepts and ideas:

* An argument is a collection of statements, called premises, intended to establish how true another statement is, called the conclusion. Premises could be clearly stated or implicit.
* Reasons are premises given for or against the truth of a statement.
* Sometimes we want to set out more than one argument in our response to an issue. Here it can be useful to state what we are aiming to argue for overall; this can be called the main conclusion. The different arguments leading up to the main conclusion can be called intermediate arguments and their conclusions can be called intermediate conclusions.
* There is more than one way to structure an argument. For example, sometimes the conclusion is presented first, followed by the premises, and sometimes it is the other way around. Dialogue and written text is often quite jumbled and it is necessary to look for connecting words and phrases to find out what an argument is.
* When developing an argument, having a clear structure can help you see if you have missed anything, and it can help someone else follow your argument more easily.

Sample learning activities:

* Students are given simple arguments with three statements and are required to label which two statements are the premises and which is the conclusion. They are then given a more challenging list of statements to label, for example, statements in a jumbled order or including some irrelevant statements that should be left out. Student work samples of this kind of activity can be found in the rubric samples on the [Critical and Creative Thinking formative assessment rubric samples page of the VCAA website](https://www.vcaa.vic.edu.au/assessment/f-10assessment/formative-assessment/formative-assessment-rubric-samples/Pages/CriticalandCreativeThinkingSamples.aspx).
* Students explore a dialogue between friends arguing over an issue and identify the main conclusion of each friend and the arguments each is trying to make.

A lotus diagram can be used to help guide development of student understanding of how arguments are structured and linked. The class compares arguments that require only the central section to be filled out to those that require one or more connecting sections to be filled out. Students work in small groups to develop an argument as part of an inquiry, using a lotus diagram (see [appendix](#Appendix)) as a structuring tool and then using it to develop a sustained written text or oral presentation. Students could undertake research to help them complete the diagram.

An example lotus diagram on volunteering is shown on the following page. The main conclusion is that volunteering in your local community is good for the volunteer themselves as well as the community and this is shown in the central box in the central section. The reasons, or premises, given to support this are shown in the shaded boxes around it. Each of these four premises is also an intermediate conclusion. The outer sections can be used to show the premises given to support each of the intermediate conclusions.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| You might learn new skills |  | You might meet people with similar interests |  |  |  | People can find help near where they live |  | Helping increases feelings of belonging |
|  | Volunteering might help your career |  |  |  |  |  | People might like their local community more |  |
| You can practise skills learnt elsewhere |  |  |  |  |  |  |  |  |
|  |  |  | Volunteering might help your career |  | People might like their local community more |  |  |  |
|  |  |  |  | **Volunteering in your local community is good for the volunteer and the community** |  |  |  |  |
|  |  |  | It gives the community value for money |  | Volunteering can be healthy for you |  |  |  |
| The local council cannot afford to pay for all the help people need |  | More people can be helped compared to having paid workers |  |  |  | You can make new friends and not be as lonely |  | You might feel like you are making a difference |
|  | It gives the community value for money |  |  |  |  |  | Volunteering can be healthy for you |  |
|  |  |  |  |  |  | It can take your mind off your worries |  | It can give you more exercise |

**Content description:** Distinguish between main and peripheral ideas in own and others’ information and points of view [(VCCCTR014)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR014)

**Relevant achievement standard extract:** [Students] use and explain a range of strategies to develop their arguments.

Sample key concepts and ideas:

* We may want to distinguish between main and peripheral ideas when developing our own points of view or interpreting information or points of view given by others. We will take it that the term ‘ideas’ covers the range of thought that can arise in different learning area contexts.
* For the purpose of thinking about the development of arguments, we will also take it that some idea(s) within points of view are conclusions defended through argument while others are situated as a premise within an argument. For sample key concepts and ideas on the structure of arguments, see [VCCCTR013](#VCCCTR013), above, in particular the definitions of ‘main conclusion’ and ‘intermediate conclusion’.
* Sometimes what we mean by main idea is the main conclusion within a point of view. Sometimes a main conclusion given by someone else is expressed clearly and is easy to identify. At other times we need to look and see if the source material appears to be consistent about something or repeatedly mentions something. For example, someone’s main idea might be ‘Plastic drinking straws should not be used at all unless there is no other alternative.’ They might prepare a text where they identify reasons why most people could manage without drinking straws, noting that some people need them, such as people with particular disabilities, but without clearly stating their main idea*.*
* Stating a main idea requires being precise, that is, not being too narrow or too broad.
* You can tell if a main idea is too narrow if key supporting ideas are not covered by it. For example, in relation to our example about drinking straws, it is too narrow to say that the main idea is ‘Plastic drinking straws are not good for us to use.’ This disregards that the writer raises some benefits of drinking straws (for example, for people with particular disabilities) and disregards that the writer is recommending that most people ‘take action’ to not use drinking straws.
* You can tell if a main idea is too broad if it is so vague that you would have to go back to the source material to find out what is meant. For example, in relation to our example about drinking straws, stating that the main idea is ‘Something should be done about drinking straws’ is too vague.

Sample learning activity:

Students work in pairs. They each create a series of supporting ideas about a secret topic, purposely leaving out the main idea. Students swap sets and identify what the main idea is. They then check with their partner. They discuss whether their identification of the main idea is ‘just right’ or too broad (that is, vague) or too narrow (that is, it does not capture one or more significant supporting ideas).

**Content description:** Investigate why and when the consequences of a point of view should be considered [(VCCCTR015)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR015)

**Relevant achievement standard extract:** [Students] use and explain a range of strategies to develop their arguments.

Sample key concepts and ideas:

* Thinking about what would result if a point of view were accepted or believed can help us to decide the extent to which we agree with a point of view.
* Sometimes more than one point of view is offered and explicitly discussing consequences can help with decision-making by making it clearer who or what might be affected; the degree of risk, harm or benefit; and whether a specific goal might be achieved.

Sample learning activity:

As part of a discussion about a range of proposals, students consider the consequences of accepting each proposal and reflect on whether doing this helps them decide how strong a proposal is compared to others. For example, school council might be considering several proposals for development of part of the school grounds and arguments for or against proposals can be submitted by students. The assessment of each of these proposals in terms of consequences needs to include those affected, any risks and harms likely to arise, and overall goals.

An alternative activity might involve students placed in a mock local council subcommittee having to deal with an environmental management or community planning issue.

**Content description:** Identify and use ‘If, then…’ and ‘what if…’ reasoning [(VCCCTR016)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR016)

**Relevant achievement standard extract:** [Students] use and explain a range of strategies to develop their arguments.

Sample key concepts and ideas:

* ‘What if …’ reasoning can help us reach a view on alternatives that we are not sure about.For example, when reflecting on an accident that occurred while making something, someone might suggest that using an alternative tool could avoid this type of accident in the future. ‘What if …**’** reasoning can be used to help explore what might follow if the suggestion were adopted.
* ‘What if …’ reasoning can also be used to develop an imaginative scenario to explore the strength of ideas that are part of an argument. For example, the fairytale about the princess and the frog might have been written to help explore the idea that what makes us who we are is not associated with our physical appearance. The story can be used to think about ‘What if we had a really different physical appearance? Would we still be the same person?’
* ‘If … then …’ reasoning refers to being able to make particular kinds of inferences. One important inference is that if A then B is true then this logically means that if A, we can infer B. For example, someone might make the statement that if Geelong is a larger place than Colac, then so is Melbourne. If we know that Geelong is indeed larger than Colac, we can then infer that Melbourne is also larger than Colac. This is not necessarily a causal connection.

Sample learning activities:

* Students use ‘what if …’ reasoning to help explore alternative ideas, for example, ideas for improving the safety of a new playground space.
* With guidance, students identify instances of ‘If … then …’ reasoning used in the context of different learning areas and build a list of examples. They go on to apply their understanding to make inferences in their own arguments, where relevant.

**Content description:** Explore distinctions when organising and sorting information and ideas from a range of sources [(VCCCTR017)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR017)

**Relevant achievement standard extract:** [Students] use and explain a range of strategies to develop their arguments.

Sample key concepts and ideas:

* Making a distinction involves determining a difference between two things that share some similarities. For example, one thing that both triangles and squares share is straight sides, but one difference is that triangles have three sides and squares have four. Another example is ‘rules’ and ‘laws’, which share some common elements (for example, they both guide behaviour) but which also have key differences (for example, who gets to make them).
* Often there are many distinctions that could be made. Identifying the purpose for making a distinction can help to select which distinction(s) matter.
* Identifying a relevant distinction can be a useful strategy when making an argument. For example, when discussing a healthy eating message in the media, a distinction could be made between treats and everyday foods as part of an argument about how that message should influence our eating decisions.

Sample learning activity:

Part 1:

* Students are given a range of prompts from familiar contexts and with guidance complete a cloze activity demonstrating how to make a distinction, for example, ‘They are both similar in … but they are different in …’ Students work in pairs to consider learning area–based examples, such as comparing a tourist destination in a neighbouring country with a tourist destination in another neighbouring country. Responses are shared between pairs to demonstrate how several distinctions could be made. A Venn diagram or table could be used as a tool to represent distinctions.

Part 2:

* The teacher then introduces a purpose for making distinctions, such as considering which of the different places would be best to visit in summer. The class discusses how having this purpose can help guide what distinctions to make, for example, thinking about the similarities and differences in the weather in each place.

Levels 5 and 6

**Content description:** Investigate common reasoning errors including contradiction and inconsistency, and the influence of context [(VCCCTR024)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR024)

**Relevant achievement standard extract:** [Students] explain and apply basic techniques to construct valid arguments …

Sample key concepts and ideas:

* When it is claimed that a statement in an argument logically conflicts with other statement(s) in the argument – that is, it is not possible for them all to be true – then inconsistency is identified as a reasoning error. A contradiction, where one statement is true and the other false, is an example of inconsistency.
* When the claim is that a statement and its opposite could not both be true at the same time, then contradiction is identified as the reasoning error. For example, someone might declare, ‘You say you have never stolen but you just said that you pirated a video game.’ The claim here is that pirating is stealing and so it cannot both be true that stealing has never occurred and that pirating has occurred. However, in this example, the person who pirated the video game could challenge the claim that they contradicted themselves by arguing that pirating is not stealing. This example demonstrates that often a contradiction is not made intentionally or the contradiction relies on an understanding that could be contestable (in this case, what constitutes stealing).
* Expression is not always precise and some apparent inconsistencies can be resolved when we take into account context or improve the precision of wording. For example, if someone seems to be inconsistent in their argument about how important it is to be truthful, this might be resolved if we consider context, such as etiquette in regards to commenting on someone’s new haircut or outfit.
* More broadly, checking for consistency within an argument can also involve checking for consistent meaning associated with concepts used in the argument. For example, if arguing for banning plastic drinking straws, the meaning of ‘banning’ should be consistent throughout the argument.

Sample learning activity:

Students consider a prompt such as ‘Is it reasonable to expect that we should sometimes eat food we don’t like?’ Students identify key terms (‘food’, ‘like’, etc.) and discuss why it is important to maintain a consistent meaning for these terms and/or be clear about the impact of context. They prepare a response and undertake peer review to check for consistency in meaning and provide feedback to each other.

**Content description:** Consider the importance of giving reasons and evidence and how the strength of these can be evaluated [(VCCCTR025)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR025)

**Relevant achievement standard extract:** [Students] explain how reasons and evidence can be evaluated. They explain and apply basic techniques to … test the strength of arguments.

Sample key concepts and ideas:

* Reasons and evidence are used to provide support for or against statements, in order to build a degree of confidence in the truth of the statement.
* One type of evidence is factual evidence, often presented in the form of examples or data.
* While many reasons often include relevant factual evidence, not all do. Some reasons appeal to needs and values, for example, ‘I think you should volunteer with the sports team as I think you will feel less lonely.’
* Examples can be founded in direct experience or trusting the experience of others, which is why the source(s) of authority should be carefully considered. As examples are often based in experience, analysing the strength of an example can be assisted by analysing the experience associated with it. For example, if someone argues that a film deserves an award because it has unusual sound effects, we might ask for an example or range of examples before deciding whether we agree. But we might also want to know how familiar the person is with films in general as a way of telling if they might be able to distinguish a usual sound effect from an unusual one.

In considering experience we can also think about how relevant the experience is to the current context. Similarly, is the experience sufficiently up to date?

* Information involves data that has been manipulated. Data can include numbers, letters or other symbols, or images or sounds. Information involves data that has been manipulated and can be represented in charts, graphs, tables, diagrams and so on. These can also show relations between sets of data and can be used as a way of evaluating reasons and evidence.
* Different disciplines have different ways of evaluating the strength of evidence, for example, by considering its relevance, sufficiency and coherence with other evidence. Disciplines also help us to know how to evaluate sources of authority.
* We can evaluate reasons and evidence individually, but where relevant we should also consider all reasons and evidence given as a coherent whole.

Sample learning activity:

As part of developing a point of view on an issue, students discuss the role that providing reasons will play and plan how they will evaluate the reasons and evidence given for and against the point of view.

**Content description:** Consider when analogies might be used in expressing a point of view and how they should be expressed and evaluated [(VCCCTR026)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR026)

**Relevant achievement standard extract:** [Students] explain and apply basic techniques to construct valid arguments and test the strength of arguments.

Sample key concepts and ideas:

* Drawing an analogy as part of an argument involves making a particular kind of comparison where it is claimed that if two things are similar in some way then they must be similar in some other way. For example, we may want to argue that people should exercise more and so we include an analogy such as ‘Our bodies are similar to a machine, as they both have moving parts that work together as system, and just as machines go rusty and break down if not used, so will our bodies break down if we don’t exercise.’
* Analogies are often used to represent complex ideas more simply.
* Evaluating the strength of an analogy involves thinking about whether the comparison really is as claimed and whether the differences between the two things being compared are important given what the analogy is trying to achieve – in other words, whether the similarities are more significant than the differences. In order for the analogy between bodies and machines to be persuasive, the significance of the claimed similarities between bodies and machines would have to outweigh the significance of any differences in the context of exercise.
* Similes and metaphors are other ways of making comparisons between things.

Sample learning activity:

Students are given a range of arguments that use analogies. They identify what is being compared and place relevant similarities and/or differences side by side in a table, and they use this to assist in evaluating the analogy. The range of arguments could build on prior knowledge across learning areas. For example, one given argument might be about why Mars might support life and include an analogous comparison between Earth and Mars, including they both orbit around the Sun and revolve on an axis. Another given argument might involve the analogy that just as we should not fight on the playground, we should not fight on the sports field.

**Content description:** Examine the difference between valid and sound arguments and between inductive and deductive reasoning, and their degrees of certainty [(VCCCTR027)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR027)

**Relevant achievement standard extract:** Students distinguish between valid and sound arguments and between deductive and inductive reasoning … They explain and apply basic techniques to construct valid arguments and test the strength of arguments.

Sample key concepts and ideas:

* An argument is a connected series of statements, consisting of at least one premise and a conclusion. In presenting an argument we generally want someone to accept the conclusion that we are arguing for.
* Evaluating an argument involves judging the truth of the premises as well as the logical inference required to get from the premises to the conclusion.
* Distinguishing between valid and sound arguments is useful for reminding us to check both the logic of the argument and the truth of the premises that the argument contains.

If we want to check only the logic used, this is called checking the validity of the argument. When doing this we think about whether the conclusion would logically follow from the premises if they happened to be true. If the conclusion can logically be inferred from the premises, the argument is valid. For an argument to be valid, the premises do not have to actually be true as it is only the logic that we are concerned with, that is, the connection between the premises and the conclusion.

Of course, whether the premises are true or not often matters to us and a sound argument is one where we judge the argument to be logical (valid) and the premises to be true*,* leading us to accept the conclusion. If either the logic or the truth of the premises are a problem, then the argument is unsound.

As an illustration, compare the following:

Argument 1: **Only** kids in my classroom like playing with toys. (premise)

Tam is in my classroom and likes playing with toys. (premise)

Therefore, Tam is a kid. (conclusion)

Argument 2: **All** kids in my classroom like playing with toys. (premise)

Leo is in my classroom and likes playing with toys. (premise)

Therefore, Leo is a kid. (conclusion)

In Argument 1 we can see that if the premises were to be true, then the conclusion would logically follow and so the argument is at least a valid one. If it also turns out the premises are true, then the argument would be sound.

In Argument 2 we can see that even if the premises were true, the argument is not logical. Consider what follows logically from the first premise – just because all the kids in the classroom like playing with toys does not mean that others in the classroom, such as teachers, do not like playing with toys too. It is easy to see that Leo might be a teacher or a kid or a visiting helper who likes to play with toys. The argument is therefore invalid as we cannot infer that Leo is definitely a kid.

Checking if the premises are true might involve some research or finding other evidence.

* In deductive reasoning an argument’s conclusion must be true provided the premises are true and the argument is valid. It is a way of thinking that lets us be certain that if we begin with a premise that we are certain of, what we conclude will also be true. A simple form is shown in Argument 1 above, where a logically valid conclusion about Tam is deduced from a general claim made in the first premise and a related specific example in the second premise.
* Inductive reasoning involves trying to establish that a conclusion in the form of a generalisation is true or likely to be true by means of specific observable examples, incidents or facts known to be true. For example, I might argue that ‘All swans are white’ because so far I have only ever seen white swans. This reasoning has less certainty than deductive reasoning and one counter instance (for example, a black swan in Western Australia) will refute the conclusion. Knowing this I might instead use inductive reasoning to conclude: ‘It is highly likely that all swans are white.’
* Often with inductive reasoning we are hesitant to draw a strong conclusion from observable cases. Hesitation about the conclusion might be because of the nature of the evidence we have concerning the truth of the premises, the source of authority or how confident we are of cause and effect. For example, we might want to argue that the convenience store is more expensive to shop at than the school canteen. Our basis for this might be that the four items we bought at the canteen were cheaper. But it does not establish the conclusion with certainty, as one cheaper item obtained from the store will refute it. This might lead us to be cautious and argue that the convenience store is ‘likely’ to be more expensive or be ‘generally’ more expensive, where ‘general’ is understood to recognise that there are some exceptions.

Sample learning activity:

As students encounter relevant learning area–based contexts, they are guided to consider whether inductive or deductive reasoning is involved in drawing conclusions. For example, in an Economics and Business context, they could compare how we might reason why a particular business exists based on what we know about businesses in general versus what we might conclude about businesses in general based on our observations of particular businesses.

**Content description:** Explore what a criterion is, different kinds of criteria, and how to select appropriate criteria for the purposes of filtering information and ideas [(VCCCTR028)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR028)

**Relevant achievement standard extract:** [Students] explain and apply basic techniques to construct valid arguments and test the strength of arguments.

Sample key concepts and ideas:

* Criteria are the bases that we use to make a judgment, with a criterion (the singular of ‘criteria’) referring to just one basis.
* Which criteria we might want to select depends on what we want to do. For example, we might want to either describe or evaluate something. The criteria we use for describing something (accuracy, clarity, brevity) is different to what we might use if we are evaluating something (truth, coherence with beliefs, objectivity, evidence, etc.).
* Criteria can help us make comparisons. For example, we may want to compare plaster and modelling clay as art materials. To do so we select a standard or basis for comparison such as which is the most malleable. Here ‘malleability’ is the selected criterion.
* Criteria can also help us to place something in one or more categories. For example, we might want to allocate plaster and modelling clay to one or more categories without necessarily directly comparing them. Determining whether modelling clay is toxic or not involves analysing the clay itself, so we do not need to compare the clay to plaster unless we want to see if it is more or less toxic than plaster.
* In terms of reasoning, criteria can be used to give us a basis for judging the relevance of information and to help analyse and evaluate ideas.

Sample learning activity:

Students use criteria when developing an argument. For example, as part of a discussion about whether an item in a story was borrowed or stolen, students explicitly use given criteria as to what constitutes borrowing and stealing to develop their perspectives.

Appendix – Example of a complex argument structured in a lotus diagram

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |
|  | **Intermediate conclusion A** |  |  | **Intermediate conclusion B** |  |  | **Intermediate conclusion C** |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  | **Premise A** | **Premise B** | **Premise C** |  |  |  |
|  | **Intermediate conclusion D** |  | **Premise D** | **Conclusion** | **Premise E** |  | **Intermediate conclusion E** |  |
|  |  |  | **Premise F** | **Premise G** | **Premise H** |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | **Intermediate conclusion F** |  |  | **Intermediate conclusion G** |  |  | **Intermediate conclusion H** |  |
|  |  |  |  |  |  |  |  |  |