

Chapter 2: Hints and Selected Solutions

Section 2.1 (page 44)

2.1

Argument	Valid?	Sound in Socrates' World?	Sound in Wittgenstein's World?
1.	Yes	Yes	No
2.			
3.			
4.	Yes	Yes	No
5.			
6.			
7.	No	No	No
8.			

2.2

1. $\left\{ \begin{array}{l} \text{Anyone who wins an academy award is famous} \\ \text{Meryl Streep won an academy award} \end{array} \right. \\ \hline \text{Meryl Streep is famous}$

The argument is valid but it is not sound since the first premise is false. (There are lots of people who have won various academy awards but who are not famous.)

4. $\left\{ \begin{array}{l} \text{Al Gore is a politician} \\ \text{Hardly any politicians are honest} \end{array} \right. \\ \hline \text{Al Gore must be dishonest}$

The argument is not valid. For example, it is logically possible that Al Gore is the single honest politician out of thousands of politicians.

7. What if Max lives on a corner?

- 2.3 1.

1.	Many of the students in the class attend film screenings.
2.	There must be many students in the class.

This argument is not valid. The word “many” could be used in vary difference senses in the two sentences.
3.

3.	Many students attend film screenings.
4.	Only students in the film class attend film screenings.
5.	There are many students in the film class.

This argument is valid.

Section 2.2 (page 53)

- 2.6 (We assume you have done 2.5.) We are told that $\text{SameRow}(a, a)$, that $a = b$, and that $b = c$. From the latter two we can conclude $a = c$ by the transitivity of identity. Now substitute the name c for the first use of the name a in $\text{SameRow}(a, a)$, using the indiscernibility of identicals. This gives us the desired conclusion, $\text{SameRow}(c, a)$.
- 2.8 This is not valid. You should submit a world in which a is large and c is medium.
- 2.11 This is not valid. For example, it could be that $c = a$ for all we know.
- 2.14 This argument is valid. Since b is between a and c , there is a straight line from a to b on to c . But a is left of c so you must be going from left to right along this line from a to c . But you pass b as you go, so b must also be left of c .

Section 2.4 (page 62)

- 2.16

1.	$b = c$
2.	$a = b$
3.	$a = c$

 ✓ ▾ = Elim: 2,1

- 2.19

1.	Smaller(a, b)
2.	Smaller(b, c)
3.	Smaller(a, c)

 ✓ ▾ Ana Con: 2,1

Section 2.5 (page 65)

2.22 The argument is not valid. Hence it cannot be sound, because sound arguments are a special kind of valid argument, one where the premises are all true. To see that it is not valid, imagine that there were only two computer scientists, Bill Gates and Steve Jobs, that they were both rich, but that only Steve Jobs knows how to program. Then all the premises would be true, but the conclusion false. So the argument cannot be valid.

2.24 | 1. Larger(b, c)
| 2. Smaller(b, d)
3. SameSize(d, e)
4. Larger(d, c) ✓ ▾ Ana Con: 1,2
5. Larger(e, c) ✓ ▾ Ana Con: 3,4

2.27 | 1. SameRow(b, c)
| 2. SameRow(a, d)
| 3. SameRow(d, f)
4. FrontOf(a, b)
5. SameRow(a, f) ✓ ▾ Ana Con: 2,3
6. FrontOf(f, b) ✓ ▾ Ana Con: 4,5
7. FrontOf(f, c) ✓ ▾ Ana Con: 6,1