**2.1**

| **Argument** | **Valid?** | **Sound in Socrates’** | **Sound in Wittgenstein?** |
| --- | --- | --- | --- |
| 1 | Yes | Yes | No |
| 2 | Yes | Yes | No |
| 3 | Yes | Yes | No |
| 4 | Yes | Yes | No |
| 5 | No | No | No |
| 6 | Yes | Yes | No |
| 7 | No | No | No |
| 8 | Yes | Yes | No |

**2.4**

Yes. If the premises are false, the conclusion can be either true or false; the definition of validity does not touch on this case.

Example:

If I come to work, Mikaela makes a jug of coffee.

I came to work yesterday

Yesterday, Mikaela made a jug of coffee

No. The conclusion cannot be false and the premises true, by definition of a valid argument.

Yes. A valid argument is one in which if the premises are true, the conclusion must be true.

Same example as before, but assuming a world where the two premises are true.

**2.5 (Transitivity of Identity)**

By assumption b is the same object as c.

By assumption a = b. By the principle of Indiscernability of Identicals, we can replace the name b in a=b with c. Therefore, a = c.

**2.13**

By assumption, a is the same size as b, and a is also larger than c. Therefore b is larger than c as well. By assumption, c is larger than d. Therefore, b is larger than d.