1. a) Yes. One who denies the Identity of Indiscernibles allows for the possibility of non-identical indiscernibles. However, such a person might hold that in order to discover that two things are non-identical we need to discover a property or relational difference between them. This route allows for the possibility of non-identities that cannot be discovered. Still, so long as we clearly separate metaphysics from epistemology, it is a possibility. [One could also defend a “No” answer. But this would likely require defending some form of verificationism.]

b) Yes. The denier of the Identity of Indiscernibles permits non-identity despite indiscernibility. How, then, can this denier know that she has only one left hand? For all she knows, she has 2, 3, or more indiscernible left hands! [Well, not so fast. A “No” answer could also be defended here. But, this answer requires pointing out a disanalogy between the hands and 2-spheres cases. The main disanalogy is that the many hands would be at the same spatial location, but the two spheres would be at distinct spatial locations. (Also note: The skeptical worry could be raised in the (supposedly only) two spheres world.)]

c) i) Aristotelian universals are capable of multiple-location, and they are wholly present in each of their instances. Black’s “spheres”, on the assumption of Aristotelian universal bundle-theory, are actually multiple occurrences of the very same sphere! According to bundle theory, the sphere is just a bundle of properties. And according to the Aristotelian universalism, the bundle of properties is bi-located. So, one and the same sphere is at two locations.

ii) Tropes, unlike Aristotelian universals, are particulars (incapable of multiple location). So, the spheres are bundles of particular properties that exactly resemble. Because the properties are particular, the bundles are particular as well. So, these are two distinct spheres. But because all the tropes exactly resemble, these two spheres, which are just bundles of tropes, also exactly resemble.

iii) While Aristotelian universals are capable of multiple location, the substances they inhere in are not capable of multiple location. These substances are particular. So, the spheres themselves are as particular as their substances—the particularity of the substances explains the distinctness of the spheres. (Without such substances, we are left with a bundle theory, as in i.) These distinct spheres do share the very same (in the numerical sense) properties, however, as part of their internal constitution. This sharing of parts explains their exact resemblance.

2. Kripke uses the Indiscernibility of Identicals to argue for the Necessity of Identity (between names/objects):

P1. The Indiscernibility of Identicals. (For all x and y) If x=y, then if x has property P, y has property P as well.

P2. The Necessity of Self-Identity. (For all x) Necessarily(x=x).

C1. Therefore, if x=y, then (if necessarily(x=x), then necessarily(x=y)).

C2. Therefore, if x=y, then necessarily(x=y)
Gibbard disagrees with Kripke’s application of the Indiscernibility of Identicals to so-called modal properties. For Gibbard, objects do not have modal properties *simpliciter*, but only relative to a sortal. Relatedly, names do not apply to objects *simpliciter*, but only relative to a sortal. For example, some object is essentially statue-shaped *qua* statue, but only accidentally statue-shaped *qua* lump. ‘Goliath’ refers to this thing *qua* statue, but ‘Lump’ refers to this thing *qua* lump. So, Goliath and Lump differ in their essential properties. So if “they” are identical (as Gibbard claims), then they are only contingently identical. This contradicts Kripke’s conclusion.

Russell denies Kripke’s assumption that (ordinary) names directly refer to objects. Instead, for Russell, names are shorthand for definite descriptions. As such, they refer to different objects in different contexts (i.e., possible worlds). So names, such as ‘Hesperus’ and ‘Phosphorus’, pick out different heavenly bodies in different possible worlds. Therefore, identity statements between names, such as ‘Hesperus=Phosphorus’, are only contingently true.

For Kripke, ‘Hesperus’ and ‘Phosphorus’ are rigid designators, meaning that they tag the very same thing in every world in which that thing exists. In fact, these names tag the same thing (and so also do so in every possible world in which that thing exists). So, there is no possible world in which Hesperus is distinct from Phosphorus. In other words, this is a necessary identity.

Though it is (and always was) metaphysically impossible for Hesperus to be distinct from Phosphorus, it nevertheless was possible *for all we knew* that they were distinct. That is, it was an *epistemic* possibility. This is because it was not known that ‘Hesperus’ and ‘Phosphorus’ tag the same thing. If we were to find out, by uncovering some astronomical conspiracy, that ‘Hesperus’ and ‘Phosphorus’ do not actually tag the same heavenly body, then Hesperus and Phosphorus would be necessarily non-identical. Any object or name identity is either necessarily true or necessarily false. The illusion of contingency is explained by our having to discover if one and the same thing has been tagged twice.

3. Quine holds that we are ontologically committed to those entities that are needed to make the statements of our best overall theory of the world literally true. For example, if we accept as a literal truth ‘There is a prime number larger than one million’, then we are ontologically committed to numbers (and prime numbers in particular). For, that statement is claiming: There exists an *x* such that *x* is a prime number and *x* is larger than a million. This way of formalizing things illustrates Quine’s slogan that “To be assumed as an entity is, purely and simply, to be reckoned as the value of a variable”. (9) [You can also comment on how we are to evaluate theories of the world—e.g., by simplicity and pragmatic considerations.]

Internal questions are those that are asked from within the assumptions of a linguistic framework, and external questions are those that are asked, without such assumptions, about the linguistic framework as a whole. The vocabulary of mathematics provides us
with an example of a linguistic framework. We can ask “Are there numbers?” from within this framework. The rather obvious answer to this internal question is “Of course. 1, 2, 3, etc. are all numbers.” But, if we ask “Are there really numbers?”, where the ‘really’ qualification emphasizes that we are not assuming the linguistic framework of mathematics, then we are asking a meaningless external question. This question is meaningless, and therefore has no answer, because there is no way to verify its truth. No evidence could possibly resolve this external question. Instead, the acceptance of a linguistic framework hinges on entirely practical, as opposed to theoretical, considerations.

Carnap’s view does not imply that it is indeterminate whether numbers really exist. Rather, there is no fact of the matter because the question lacks cognitive content—it is a pseudo-question.

4. The meaning of a logically proper name is simply that which it refers to, or tags. Logically proper names are purely referential and do not have any descriptive component. Russell held that demonstratives like ‘this’ and ‘that’ are logically proper names. ‘Santa Claus’ is not a logically proper name, as it fails to refer and it has a descriptive component. Russell held that ordinary names are truncated descriptions.

Russell would analyze ‘Santa Claus is fat and jolly’ as follows. ‘There exists an x such that: x is Santa Claus (i.e., meets the description associated with that name), x is fat, and x is jolly (and no other thing meets Santa Claus’s description).’ This sentence is false according to Russell’s analysis, as Santa Claus does not exist.

Since the meaning of a logically proper name is just that which it refers to, a logically proper name can be meaningfully used only if it actually refers. It would be “nonsense” to name a thing and then inquire if it exists. This would be like pointing to something and then asking if the thing you pointed to exists. The meaningful use of a logically proper name requires the existence of its referent. And using a supposed logically proper name that lacks a referent would be nonsense for a different reason—it would be literally meaningless (as the logically proper name itself lacks meaning/reference). We can meaningfully ask existence questions on by using descriptions, in the manner of the Santa Claus example above. [You can also talk about propositional functions, and Russell’s view that existence is a property of propositional functions as opposed to things.]

5. Against Quine: All actual things that have hearts also have kidneys. So, the class of all things with hearts is the same as the class of all things with kidneys. But the property of having a heart is different from the property of having a kidney. Therefore, those properties cannot be identical to those sets.

Against Lewis: Possibilia are exotic things that we should be reluctant to admit into our ontology. Nevertheless, the co-extensive class worry can arise even with possibilia. For example, the class of all (actual and possible) trilateral things is identical with the class of all (actual and possible) triangular things. But, the property of trilaterality is different from the property of triangularity.
Universals provide a good answer to the One over Many problem. The One over Many problem asks “What accounts for the sameness of the many different instances of a kind?” The believer in universals answers that the many different instances of a kind all have a part in common—namely, a universal that is wholly present in each of these instances.

The trope theorist has a less satisfying answer (perhaps) to the One over Many problem. For him, the many different instances of a kind each have an exactly resembling, but numerically distinct, trope in common. The trope theorist leaves this exact resemblance as primitive, whereas the universalist has the advantage of explaining exact resemblance in terms of identity. However, the trope theorist has the advantage of not positing things that are multiply-located. After all, how can one thing be wholly present at so many distinct locations?

6. Quine recognizes that induction, language acquisition (which is itself a type of induction), and the capturing of similarities all require recourse to natural kinds. For example, not all classes mark off real similarities—there are even more classes marking off dissimilarities. In order to do the work mentioned above, some classes must be privileged—these are the natural classes. Similarly, Lewis wants perfectly natural kinds in order to mark real similarities, formulate the laws of nature, as well as supply meanings for our language and the contents for our intentional attitudes.

Both Quine and Lewis can, and do, allow for naturalness as a primitive feature of certain classes. Quine, unlike Lewis, sees the “natural” status of certain classes as being in flux, however. For Quine, the naturalness of a kind is also dependent on human classificatory practices and facts about our psychology. Therefore, we should expect there to be a rough matching of “quality spaces” across our fellow humans, as we are all biologically similar and products of evolution by natural selection. But we have little reason to think that the world itself is governed in a way that respects the “quality spaces” and natural kinds that we pick out. Nevertheless, when we reason inductively we are assuming that the world itself is carved in a way that matches our quality spaces.