

# DRILLS 1 - INFORMATION AND IDEAS

1. The ice melted on a Norwegian mountain during a particularly warm summer in 2019, revealing a 1,700-year-old sandal to a mountaineer looking for artifacts. The sandal would normally have degraded quickly, but it was instead well preserved for centuries by the surrounding ice. According to archaeologist Espen Finstad and his team, the sandal, like those worn by imperial Romans, wouldn't have offered any protection from the cold in the mountains, so some kind of insulation, like fabric or animal skin, would have needed to be worn on the feet with the sandal.

What does the text indicate about the discovery of the sandal?

- A) The discovery revealed that the Roman Empire had more influence on Norway than archaeologists previously assumed.
  - B) The sandal would have degraded if it hadn't been removed from the ice.
  - C) Temperatures contributed to both protecting and revealing the sandal.
  - D) Archaeologists would have found the sandal eventually without help from the general public.
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2. The following text is adapted from Maria Cristina Mena's 1914 short story "The Vine-Leaf."

*It is a saying in the capital of Mexico that Dr. Malsufrido carries more family secrets under his hat than any archbishop.*

*The doctor's hat is, appropriately enough, uncommonly capacious, rising very high, and sinking so low that it seems to be supported by his ears and eyebrows, and it has a furry look, as if it had been brushed the wrong way, which is perhaps what happens to it if it is ever brushed at all. When the doctor takes it off, the family secrets do not fly out like a flock of parrots, but remain nicely bottled up beneath a dome of old and highly polished ivory.*

Based on the text, how do people in the capital of Mexico most likely regard Dr. Malsufrido?

- A) Few feel concerned that he will divulge their confidences.
- B) Many have come to tolerate him despite his disheveled appearance.
- C) Most would be unimpressed by him were it not for his professional expertise.
- D) Some dislike how freely he discusses his own family.

3. NASA's Cassini probe has detected an unusual wobble in the rotation of Mimas, Saturn's smallest moon. Using a computer model to study Mimas's gravitational interactions with Saturn and tidal forces, geophysicist Alyssa Rhoden and colleagues have proposed that this wobble could be due to a liquid ocean moving beneath the moon's icy surface. The researchers believe other moons should be examined to see if they too might have oceans hidden beneath their surfaces.

Which choice best states the main idea of the text?

- A) Rhoden and colleagues were the first to confirm that several of Saturn's moons contain hidden oceans.
- B) Research has failed to identify signs that there is an ocean hidden beneath the surface of Mimas.
- C) Rhoden and colleagues created a new computer model that identifies moons with hidden oceans without needing to analyze the moons' rotation.
- D) Research has revealed that an oddity in the rotation of Mimas could be explained by an ocean hidden beneath its surface.

4. Hip-hop pedagogy is a form of teaching that's gaining popularity across school subjects. It involves incorporating hip-hop and rap music into lessons as well as using hip-hop elements when teaching other subject matters. For example, Quan Neloms's students look for college-level vocabulary and historical events in rap songs. Researchers claim that in addition to developing students' social justice awareness, hip-hop pedagogy encourages student success by raising students' interest and engagement.

Which finding, if true, would most strongly support the underlined claim?

- A) Students tend to be more enthusiastic about rap music than they are about hip-hop music.
- B) Educators report that they enjoy teaching courses that involve hip-hop and rap music more than teaching courses that don't.
- C) Courses that incorporate hip-hop and rap music are among the courses with the highest enrollment and attendance rates.
- D) Students who are highly interested in social justice issues typically don't sign up for courses that incorporate hip-hop and rap music.

5. Pulitzer Prize-winning writer Hector Tobar has built a multifaceted career as both a journalist and an author of short stories and novels. In an essay about Tobar's work, a student claims that Tobar blends his areas of expertise by applying journalism techniques to his creation of works of fiction.

Which quotation from a literary critic best supports the student's claim?

- A) "For one novel, an imagined account of a real person's global travels, Tobar approached his subject like a reporter, interviewing people the man had met along the way and researching the man's own writings."
- B) "Tobar got his start as a volunteer for *El Tecolote*, a community newspaper in San Francisco, and wrote for newspapers for years before earning a degree in creative writing and starting to publish works of fiction."
- C) "Many of Tobar's notable nonfiction articles are marked by the writer's use of techniques usually associated with fiction, such as complex narrative structures and the incorporation of symbolism."
- D) "The protagonist of Tobar's third novel is a man who wants to be a novelist and keeps notes about interesting people he encounters so he can use them when developing characters for his stories."

6. *Electra* is a circa 420-410 BCE play by Sophocles, translated in 1870 by R.C. Jebb. Electra, who is in mourning for her dead father and her long-absent brother, is aware of the intensity of her grief but believes it to be justified: \_\_\_\_\_

Which quotation from *Electra* most effectively illustrates the claim?

- A) “O thou pure sunlight, and thou air, earth’s canopy, how often have ye heard the strains of my lament, the wild blows dealt against this bleeding breast, when dark night fails!”
- B) “I know my own passion, it escapes me not; but, seeing that the causes are so dire, will never curb these frenzied plaints, while life is in me.”
- C) “Send to me my brother; for I have no more the strength to bear up alone against the load of grief that weighs me down.”
- D) “But never will I cease from dirge and sore lament, while I look on the trembling rays of the bright stars, or on this light of day.”

7. Tadpole Body Mass and Toxin Production after Three Weeks in Ponds

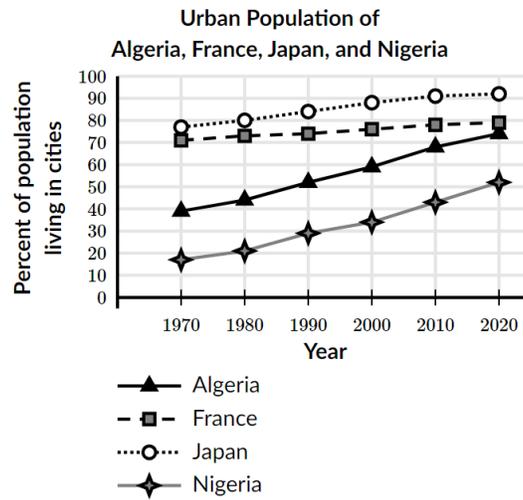
Population density	Average tadpole body mass (milligrams)	Average number of distinct bufadienolide toxins per tadpole	Average amount of bufadienolide per tadpole (nanograms)	Average bufadienolide concentration (nanograms per milligram of tadpole body mass)
High	193.87	22.69	5,815.51	374.22
Medium	254.56	21.65	5,525.72	230.10
Low	258.97	22.08	4,664.99	171.43

Ecologist Veronika Bokony and colleagues investigated within-species competition among common toads (*Bufo bufo*), a species that secretes various unpleasant-tasting toxins called bufadienolides in response to threats. The researchers tested *B. bufo* tadpoles' responses to different levels of competition by creating ponds with different tadpole population densities but a fixed amount of food. Based on analysis of the tadpoles after three weeks, the researchers concluded that increased competition drove bufadienolide production at the expense of growth.

Which choice uses data from the table to most effectively support the researchers' conclusion?

- A) The difference in average tadpole body mass was small between the low and medium population density conditions and substantially larger between the low and high population density conditions.
- B) Tadpoles in the low and medium population density conditions had substantially lower average bufadienolide concentrations but had greater average body masses than those in the high population density condition.
- C) Tadpoles in the high population density condition displayed a relatively modest increase in the average amount of bufadienolide but roughly double the average bufadienolide concentration compared to those in the low population density condition.
- D) Tadpoles produced approximately the same number of different bufadienolide toxins per individual across the population density conditions, but average tadpole body mass decreased as population density increased.

8.

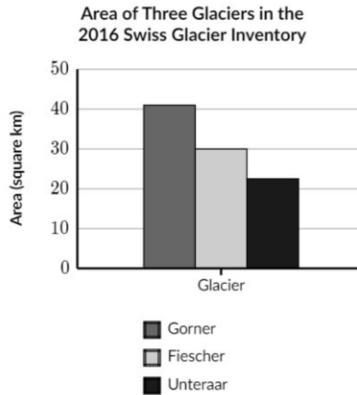


The share of the world's population living in cities has increased dramatically since 1970, but this change has not been uniform. France and Japan, for example, were already heavily urbanized in 1970, with 70% or more of the population living in cities. The main contributors to the world's urbanization since 1970 have been countries like Algeria, whose population went from \_\_\_\_\_

Which choice most effectively uses data from the graph to complete the assertion?

- A) less than 40% urban in 1970 to around 90% urban in 2020.
- B) less than 20% urban in 1970 to more than 50% urban in 2020.
- C) around 40% urban in 1970 to more than 70% urban in 2020.
- D) around 50% urban in 1970 to around 90% urban in 2020.

9.



To monitor changes to glaciers in Switzerland, the government periodically measures them for features like total area of ice and mean ice thickness, which are then reported in the Swiss Glacier Inventory. These measurements can be used to compare the glaciers. For example, the Gornier glacier had \_\_\_\_\_

Which choice most effectively uses data from the graph to complete the example?

- A) a larger area than either the Fiescher glacier or the Unteraar glacier.
- B) a smaller area than the Fiescher glacier but a larger area than the Unteraar glacier.
- C) a smaller area than either the Fiescher glacier or the Unteraar glacier.
- D) a larger area than the Fiescher glacier but a smaller area than the Unteraar glacier

10. Henry Ossawa Tanner's 1893 painting *The Banjo Lesson*, which depicts an elderly man teaching a boy to play the banjo, is regarded as a landmark in the history of works by Black artists in the United States. Scholars should be cautious when ascribing political or ideological values to the painting, however: beliefs and assumptions that are commonly held now may have been unfamiliar to Tanner and his contemporaries, and vice versa. Scholars who forget this fact when discussing *The Banjo Lesson* therefore \_\_\_\_\_

Which choice most logically completes the text?

- A) risk judging Tanner's painting by standards that may not be historically appropriate.
- B) tend to conflate Tanner's political views with those of his contemporaries.
- C) wrongly assume that Tanner's painting was intended as a critique of his fellow artists.
- D) forgo analyzing Tanner's painting in favor of analyzing his political activity

11. In many cultures, a handshake can create trust between people. Engineer Joao Avelino and his team are designing a robot to shake hands with a human in order to improve human-robot interactions. The robot hand adjusts its movements and pressure to better imitate the feel of a human hand. The researchers want the robot's handshake to feel realistic because \_\_\_\_\_

Which choice most logically completes the text?

- A) people are less likely to interact with robots that don't look like humans.
- B) it's easier to program a robot to perform handshakes than it is to program a robot to perform some other types of greetings.
- C) the robot in the researchers' study may have uses other than interacting with humans.
- D) lifelike handshakes may make people more comfortable interacting with robots.

12. Tides can deposit large quantities of dead vegetation within a salt marsh, smothering healthy plants and leaving a salt panne—a depression devoid of plants that tends to trap standing water—in the marsh's interior. Ecologist Kathryn Beheshti and colleagues found that burrowing crabs living within these pannes improve drainage by loosening the soil, leading the pannes to shrink as marsh plants move back in. At salt marsh edges, however, crab-induced soil loosening can promote marsh loss by accelerating erosion, suggesting that the burrowing action of crabs \_\_\_\_\_

Which choice most logically completes the text?

- A) can be beneficial to marshes with small pannes but can be harmful to marshes with large pannes.
- B) may promote increases in marsh plants or decreases in marsh plants, depending on the crabs' location.
- C) tends to be more heavily concentrated in areas of marsh interiors with standing water than at marsh edges.
- D) varies in intensity depending on the size of the panne relative to the size of the surrounding marsh.

## ANSWERS

- |      |      |       |
|------|------|-------|
| 1. C | 5. A | 9. A  |
| 2. A | 6. B | 10. A |
| 3. D | 7. B | 11. D |
| 4. C | 8. C | 12. B |