## 

## Think like a genius:

Reading workout: Time trial 1

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## PASSAGE 1

**HUMANITIES:** This passage is from an essay by a museum director.

Most museum displays of ancient Greek sculptures are reveries in white. Marble Gods, nymphs, beasts, and men are uniformly monochromatic; their forms differ only in the curves of their muscles and contours of 5 their hair and fur. Yet ancient Greeks would have seen a very different kind of art. The sculptures we think of as so chromatically restrained were originally painted in bright—even garish—colors and patterns.

Contemporary art conservators have begun to 10 reconstruct how ancient statues were originally painted. A 2014 exhibit in Copenhagen, the result of collaboration among conservators, archeologists, and chemists, displayed ancient sculptures alongside replicas painted with the riotous color intended by the artists. A marble statue of a 15 lion, for example, acquired a yellow body, an electric blue mane and tail, and red decorative face-paint. A muscular male torso was leafed in gold. The rest of his body was painted white and patterned with blue and red shapes like oblong balloons tied with ribbons.

Determining how a statue was once painted begins by observing the statue with the ordinary eye. The researchers then slowly deepen their view of the sculpture by using magnifying eyeglasses and microscopes outfitted with bright lights that further magnify the marble 40 times over, and finally video microscopes that magnify it 160 times. They methodically document every inch of the stone surface in search of traces of metal leaf and pigment.

Next, team members use a variety of technologies to further confirm how the marble was painted. Sometimes, 30 they take tiny samples of the statue to examine how the paint was layered. To identify more deteriorated pigments and binders (binders are the materials in which pigments are suspended), conservators use infrared spectroscopy and ultraviolet photography. These techniques utilize 35 different wavelengths of light to illuminate individual materials. When hit by particular wavelengths, certain minerals fluoresce, or glow. Since paint colors are made of specific ground minerals and elements—for example, red is often iron oxide, while green is often malachite—40 these techniques enable conservators to determine exactly which pigments were used.

Conservators can sometimes determine where colors were, even when no pigment remains. Different pigments, with their varying chemical compounds, decay at different

45 rates. Thus, certain parts of a statue become stripped of paint faster than other parts. As these parts of the statue erode more quickly than the others, a subtle relief emerges on the surface of the stone that traces the shapes of the original painted designs. Conservators can spot these reliefs 50 by shining a "raking light" parallel to the stone's surface.

Revealing aspects of ancient statues long forgotten raises new questions as to how to restore and display the art. Museums would not display as a painting a Renaissance "fresco" worn to a mere plaster wall. Why, 55 then, display bare marble as a statue? Some conservators argue that their job is to preserve the intended look of an artwork, even if that means re-fashioning large chunks of it. To these conservators, that the statues have persisted as cold monochromes for centuries matters less than the 60 original aesthetic intent of the artist.

Other conservators rightly acknowledge the passage of time. A ruin is a ruin, not a newly manufactured work. For these conservators, preservation is about protecting and repairing ancient artifacts, not creating new pieces, 65 even in the spirit of their original forms. They would argue that the ravages of time become a part of any artwork; in the case of ancient statues, that means the stripped marble becomes the piece's new skin.

The ancient Greeks themselves did not promote 70 the idea of "ruin value"—the idea that a work should be designed such that even its remains are beautiful. The principle behind "ruin value" is that the marking of time on the remains of fine art and architecture symbolizes bygone greatness. Nonetheless, the impressive nature of the 75 Greek ruins inspired the concept. Ancient statues today are artistry plus time, and the result is something that transcends artistic intent. Investigations into how they were originally painted are fascinating, and the painted replicas are stunning, if weird. The original statues, however, should 80 be left intact as ancient, weathered, creatures of stone.

- 1. The passage devotes the LEAST attention to which of the following topics?
  - A. The environmental forces that caused ancient Greek statues to lose their paint
  - **B.** The process by which conservators discover how statues were once painted
  - C. The debate between those who believe the statues should be restored to their original form and those who disagree
  - **D.** Descriptions of how ancient Greek statues originally appeared to viewers

- 2. The passage indicates that in order to ascertain the original painted ornamentation, if any, on a statue, all of the following devices may be used EXCEPT:
  - F. video microscopes.
  - G. magnifying glasses
  - H. x-ray spectroscopy.
  - J. ultraviolet photography.
- 3. The author describes "ruin value" (line 70) as:
  - A. the intention of ancient Greek sculptors and architects to create work with enduring power.
  - B. a concept inspired by ancient Greek ruins.
  - C. a slowly growing respect for time's effects on art over the past several centuries.
  - **D.** a deepening understanding of art and architecture's purpose in the world.
- 4. The author believes that the best course of action with regard to ancient Greek statues is to:
  - F. restore them to their original state.
  - G. leave them in their present-day state.
  - H. use modern technologies to alter them.
  - J. restore them to their ruin value.
- 5. The conservators discussed in lines 61-68 regard time as:
  - A. a challenge to preserving art.
  - B. a tool for understanding art.
  - C. a reason to create art.
  - D. a part of art.
- 6. In the context of the passage, "chromatically restrained" in line 7 most nearly means:
  - F. dull to the average observer.
  - G. opaque.
  - H. black.
  - J. singular in color.

- 7. By "Museums would not display as a painting a Renaissance 'fresco' worn to a mere plaster wall" in lines 53-54, the author intends to convey:
  - **A.** the arguable absurdity of featuring the Greek statues without paint.
  - **B.** the irrationality of displaying a painting so worn, its paint was gone.
  - C. the double standard held by museums with regard to paintings and sculpture.
  - D. the futility of attempting to compare frescos and sculptures.
- 8. The author most likely uses quotation marks around "raking light" in line 50 in order to mean that it is:
  - F. not generally accepted as the device's name.
  - G. a device whose name is not commonly known.
  - H. a device that does not actually rake.
  - J. not actually a light.
- **9.** According to the passage, ancient Greek statues were sometimes adorned with which of the following?
  - A. Pink paint
  - B. Face paint
  - C. Rubber balloons
  - D. Gold leaf
- 10. The passage mentions which of the following as a particularly powerful instrument?
  - F. Infrared spectroscopy
  - G. Video microscopes
  - H. Ultraviolet photography
  - J. Raking lights