Hard General Knowledge

Use this key to check answers and read the explanations.

1. Astronomers noticed that Uranus did not move exactly as expected. Which planet was found in 1846 after mathematicians predicted where a body causing that difference might be?

A. Neptune
B. Jupiter
C. Saturn
D. Mercury

Correct answer: A. Neptune
Urbain Le Verrier calculated a position for the unseen planet. Johann Gottfried Galle looked near that position and found Neptune.

2. What crosses the bridge in J. M. W. Turner’s painting Rain, Steam, and Speed – The Great Western Railway?

A. A team of draft horses
B. A covered wagon
C. A steam train
D. A line of pedestrians

Correct answer: C. A steam train
Turner set the main action on the Maidenhead Railway Bridge, with the train approaching through the rain.

3. Which painting technique produces the many small points of color in Georges Seurat’s A Sunday on La Grande Jatte – 1884?

A. Sgraffito
B. Pointillism
C. Fresco
D. Woodcut printing

Correct answer: B. Pointillism
Seurat built up the image with small touches of color. That method is known as pointillism.

4. Which observatory was chosen as the reference for zero longitude at the 1884 International Meridian Conference?

A. The U.S. Naval Observatory
B. The Paris Observatory
C. The Berlin Observatory
D. The Royal Observatory at Greenwich

Correct answer: D. The Royal Observatory at Greenwich
The delegates chose the meridian through the transit instrument at Greenwich. The conference itself took place in Washington, D.C.

5. A fictional mineral scratches feldspar but is scratched by quartz. Feldspar is 6 and quartz is 7 on the Mohs scale. Where does the sample fit?

A. Below 6
B. Between 6 and 7
C. Above 7
D. Exactly 7

Correct answer: B. Between 6 and 7
In the scenario, the sample is harder than feldspar and softer than quartz. The two observations put it between the reference minerals.

6. Phobos completes roughly three circuits around Mars in a Martian day. Which description fits the orbit of Deimos?

A. It takes longer than a Martian day to make one circuit.
B. It takes about one-third as long as Phobos’s orbit.
C. It completes one orbit in the same time as Phobos.
D. It completes a circuit each time Mars rotates halfway around.

Correct answer: A. It takes longer than a Martian day to make one circuit.
The more distant moon, Deimos, takes about 30 hours for one orbit. A Martian day is a little over 24 Earth hours.

7. The 1874 Treaty of Bern created the General Postal Union. What name did that organization take in 1878?

A. International Maritime Organization
B. International Telecommunication Union
C. World Customs Organization
D. Universal Postal Union

Correct answer: D. Universal Postal Union
As its membership spread, the organization changed its name to the Universal Postal Union in 1878.

8. A telegraph cable linked Ireland and Newfoundland briefly in 1858. In which year did a laid cable provide a lasting link after further attempts?

A. 1874
B. 1861
C. 1866
D. 1888

Correct answer: C. 1866
The 1858 connection failed within weeks. A new cable was successfully laid in 1866.

9. An instrument report gives magnetic flux density in webers per square meter. Which named SI unit means the same thing?

A. Tesla
B. Henry
C. Farad
D. Coulomb

Correct answer: A. Tesla
One tesla equals one weber per square meter. The weber alone measures magnetic flux.

10. In Jan van Eyck’s Arnolfini Portrait, what does the convex mirror show in addition to the backs of the couple?

A. A person playing a lute
B. A second chandelier
C. A boat on a distant river
D. Two figures in the doorway

Correct answer: D. Two figures in the doorway
The reflection shows two people standing in the doorway behind the viewer’s vantage point. The National Gallery describes their exact identities as uncertain.

11. A ship follows a constant true bearing that crosses several meridians. On a normal Mercator chart, how is this route drawn between those crossings?

A. As a circle centered on the North Pole
B. As a curve that bends at each meridian
C. As one straight line
D. As separate straight segments with a different angle at each meridian

Correct answer: C. As one straight line
A course at constant true bearing is called a rhumb line. One purpose of the Mercator projection is to display rhumb lines as straight lines.

12. Bibliographers often use B42 for the Gutenberg Bible. What does the number describe?

A. The total number of printed illustrations
B. The number of lines of type in a standard column
C. The number of books in its New Testament
D. The weight in pounds of one bound volume

Correct answer: B. The number of lines of type in a standard column
A standard page has two columns, each with 42 lines. That layout gives the book its short name.

13. The original edition of Audubon’s The Birds of America used sheets called double elephant folios. Which goal explains the unusually large paper?

A. Folding the pages into envelopes for single specimens
B. Adding the full written description to every plate
C. Printing each plate as an uncut sheet of postage stamps
D. Showing birds at life size where possible

Correct answer: D. Showing birds at life size where possible
Audubon worked at life size. The large sheets gave his engraved illustrations room, although some large birds still had to be posed to fit.

14. Columbia University holds the mathematical record known as Plimpton 322. What physical form does the original artifact take?

A. A Babylonian clay tablet with cuneiform marks
B. A Greek papyrus roll with inked diagrams
C. A Roman wax board with Latin labels
D. A medieval European parchment leaf

Correct answer: A. A Babylonian clay tablet with cuneiform marks
The record is inscribed in cuneiform on a clay tablet. The exact use of its mathematical table remains debated.

15. An early Edison phonograph in the Smithsonian has a brass cylinder with a replaceable surface where the sound was recorded. What material covered that cylinder?

A. Waxed fabric
B. Celluloid film
C. Tin foil
D. Paper coated with lampblack

Correct answer: C. Tin foil
A stylus marked the foil wrapped around the cylinder. Wax recording surfaces were adopted on later phonographs.