

Diagnostic Reading ACT

40 Questions — 35 minutes

INSTRUCTIONS: There are four passages on this test with 10 items about each passage. Choose the best answer for each item based on the passage. Then fill in the appropriate circle on the answer sheet (page 238).

Check pages 239–241 for answers and explanations.

PASSAGE I

PROSE FICTION: This passage is from Jack London's *The Call of the Wild*.

Buck did not read the newspapers, or he would have known that trouble was brewing, not alone for himself, but for every tidewater dog, strong of muscle and with warm, long hair, from Puget Sound to San Diego. Because men, groping in the Arctic darkness, had found a yellow metal, and because steamship and transportation companies were booming the find, thousands of men were rushing into the Northland. These men wanted dogs, and the dogs they wanted were heavy dogs, with strong muscles by which to toil, and furry coats to protect them from the frost.

Buck lived at a big house in the sun-kissed Santa Clara Valley. Judge Miller's place, it was called. It stood back from the road, half hidden among the trees, through which glimpses could be caught of the wide cool veranda that ran around its four sides. The house was approached by graveled driveways which wound about through wide-spreading lawns and under the interlacing boughs of tall poplars. At the rear things were on even a more spacious scale than at the front. There were great stables, where a dozen grooms and boys held forth, rows of vine-clad servants' cottages, an endless and orderly array of outhouses, long grape arbors, green pastures, orchards, and berry patches. Then there was the pumping plant for the artesian well, and the big cement tank where Judge Miller's boys took their morning plunge and kept cool in the hot afternoon.

35 And over this great demesne Buck ruled. Here he was born, and here he had lived the four years of his life. It was true, there were other dogs. There could not but be other dogs on so vast a place, but they did not count. 40 They came and went, resided in the populous kennels, or lived obscurely in the recesses of the house after the fashion of Toots, the Japanese pug, or Ysabel, the Mexican hairless—strange creatures that rarely put nose 45 out of doors or set foot to ground. On the other hand, there were the fox terriers, a score of them at least, who yelped fearful promises at Toots and Ysabel looking out of the windows at them and protected by a legion of 50 housemaids armed with brooms and mops.

But Buck was neither housedog nor kennel dog. The whole realm was his. He plunged into the swimming tank or went hunting with the Judge's sons; he escorted Mollie and Alice, the Judge's daughters, on long twilight or early morning rambles; on wintry nights he lay at the Judge's feet before the roaring library fire; he carried the Judge's grandsons on his back, or rolled them in the grass, and guarded their footsteps through wild adventures down to the fountain in the stable yard, and even beyond, where the paddocks were, and the berry patches. Among the terriers he stalked imperiously, and Toots and Ysabel he utterly ignored, for he was king—king over all creeping, crawling, flying things of Judge Miller's place, humans included.

70 His father, Elmo, a huge St. Bernard, had been the Judge's inseparable companion and Buck did fair to follow in the way of his father. He was not so large—he weighed only

one hundred and forty pounds—for his mother, Shep, had been a Scotch shepherd dog. Nevertheless, one hundred and forty pounds, to which was added the dignity that comes of good living and universal respect, enabled him to carry himself in right royal fashion. During the four years since his puppyhood he had lived the life of a sated aristocrat; he had a fine pride in himself, was ever a trifle egotistical, as country gentlemen sometimes become because of their insular situation. But he had saved himself by not becoming a mere pampered housedog. Hunting and kindred outdoor delights had kept down the fat and hardened his muscles; and to him, as to the cold-tubbing races, the love of water had been a tonic and a health preserver.

And this was the manner of dog Buck was in the fall of 1897, when the Klondike strike dragged men from all the world into the frozen North. But Buck did not read the newspapers, and he did not know that Manuel, one of the gardener's helpers, was an undesirable acquaintance. Manuel had one besetting sin. He loved to play Chinese lottery. Also, in his gambling, he had one besetting weakness—faith in a system; and this made his damnation certain. For to play a system requires money, while the wages of a gardener's helper do not lap over the needs of a wife and numerous progeny.

The Judge was at a meeting of the Raisin Growers' Association, and the boys were busy organizing an athletic club, on the memorable night of Manuel's treachery. No one saw him and Buck go off through the orchard on what Buck imagined was merely a stroll. And with the exception of a solitary man, no one saw them arrive at the little flag station known as College Park. This man talked with Manuel, and money chinked between them.

1. What is the setting of the passage?

- A. Puget Sound
- B. the Arctic
- C. Northland
- D. Santa Clara Valley

2. According to the passage, men need dogs:
 - F. for company on lonely evenings in the Arctic.
 - G. for physical warmth and comfort.
 - H. to assist them in their search for gold.
 - J. to serve as watchdogs.
3. What is Judge Miller's relationship to Buck?
 - A. Buck is the favorite dog on Judge Miller's estate.
 - B. Buck is a sled dog for Judge Miller.
 - C. Judge Miller prefers Toots and Ysabel.
 - D. Judge Miller wants to sell Buck.
4. Which choice does NOT generally describe Judge Miller's place?
 - F. Sunny and warm
 - G. Luxurious and comfortable
 - H. Woody and expansive
 - J. Dangerous and threatening
5. What does it mean that Buck was "king over all" on Judge Miller's place?
 - A. Buck had trained the other dogs to obey his rules.
 - B. Buck had a regal demeanor and seemed to have control over life at Judge Miller's place.
 - C. King was his real name; Buck was only a nickname.
 - D. Buck was the father of the other dogs.
6. Toots and Ysabel are:
 - F. Buck's sisters.
 - G. other dogs at Judge Miller's place.
 - H. Judge Miller's daughters.
 - J. Buck's best friends.
7. Which word BEST describes Buck?
 - A. Pampered
 - B. Energetic
 - C. Lonely
 - D. Lazy
8. The author describes Buck's strength and size (lines 69–90) to:
 - F. show that Buck deserved to be king.
 - G. indicate that he is the type of dog for whom trouble was brewing.
 - H. give the reader a mental picture of Buck.
 - J. show that Buck is bigger than Ysabel and Toots.

9. The author discusses the Arctic in the first paragraph, then discusses Buck's life, then returns to the Arctic in lines 91–94 to:
- A. show that Buck is happy and lucky.
 - B. contrast Buck's happy life with the difficult life he will have in the future.
 - C. demonstrate that Buck and Judge Miller have a special relationship.
 - D. point out that Manuel is a gambler.

10. The author states that "money chinked between" Manuel and the man at the park:
- F. to indicate that Manuel is gambling there.
 - G. to show that Manuel is paying for services.
 - H. because the man is buying Buck from Manuel.
 - J. because the men are going to buy supplies.

PASSAGE II

SOCIAL SCIENCE: This passage is from *Current Issues in American Democracy* by Gerson Antell and Walter Harris.

Freedom of the Press

The founders of the United States did not invent the idea of freedom of the press. It is a right that earlier generations of Americans had fought for. In 1735, for example, a newspaper printer named John Peter Zenger was arrested and put on trial for printing articles that criticized New York's royal governor. After Zenger had been in jail for nine months, he was acquitted. Zenger became a free man. The jury decided that because the articles Zenger had printed about the governor were true, he could not be punished for printing them. The Zenger case became a landmark in the history of the press in the United States.

Freedom of the press was one of the major provisions of the First Amendment to the U.S. Constitution. This provision would soon be clarified by actual events, such as the passage of the Alien and Sedition Acts in 1798 and the protests that followed. The United States was involved in an undeclared war with France on the high seas in 1798. At the same time, a wave of French immigrants was arriving on America's shores. Worried about their loyalty, Congress obliged President John Adams with the passage of three Alien Acts. They attempted to restrict further immigration. In attempting to restrict the pro-French press, the Sedition Act made any speech or writing against the president or

Congress a crime punishable by fine or imprisonment. Twenty-five people (most of them newspaper editors) were arrested; most were convicted. Thomas Jefferson and other Americans protested against the Alien and Sedition Acts. Jefferson made the acts one of the key issues in the election of 1800. When he became president in 1801, he pardoned all the editors and printers convicted under the act. The First Amendment was reaffirmed.

Events in modern history have both furthered and hindered the principle of freedom-of-the-press. Wars place excessive stress on upholding it. During the Civil War, for example, President Abraham Lincoln ordered the federal government to shut down newspapers that Union officials considered disloyal.

In World War I, the U.S. government censored some publications, citing violations of the federal Espionage Act of 1917. Socialist party leader Charles Schenck had published pamphlets urging American men to resist the draft. The government convicted him of obstructing the war effort. Schenck appealed his case all the way to the Supreme Court. While Schenck claimed that the Espionage Act violated freedom of the press, the Court ruled otherwise in 1919. It said that Schenck's actions created a "clear and present danger" to the U.S. government and people.

During World War II, the press was censored by most participating countries. Each wanted to control information that might divide a country and give information to its enemies. The U.S. Congress passed laws ban-

ning publications that might interfere with the war effort or harm national security. Reporters who roamed the battle zones found, however, that their dispatches were rarely censored by the U.S. government. In most instances, the reporters sensibly refrained from including sensitive information about troop movements—information that would have helped the enemy. The principle of a free press’s behaving responsibly was clearly demonstrated before the eyes of the men and women who were fighting for freedom.

In a more recent U.S. military engagement, the press was prevented from accompanying the troops. In 1983, when U.S. forces invaded the island of Grenada, reporters were not allowed to go along with the invading troops. Military leaders felt that the presence of reporters would endanger the secrecy of the mission. During the Allied war against Iraq in 1991, some reporters were allowed to accompany the troops to Saudi Arabia. But the U.S. military censored the reporters’ stories before they could be sent back to the United States. The amount of freedom that the U.S. government allows is not constant. Freedom of the press is continually defined and redefined.

Even in peacetime, the courts have ruled that freedom of the press does not mean that the press can publish anything, no matter how irresponsible. There are limits to what the press can publish without risking legal penalties. For instance, the press is forbidden to publish anything that is obscene or libelous. Something is obscene when it is designed only to inflame sexual desires. It is libelous when it publicly and untruthfully harms a person’s reputation.

What is more, there are many times when the press’s freedom comes into conflict with another right. In such cases, the courts have to decide which right is more important in the particular circumstances.

11. The author’s purpose in this passage is to:
- A. demonstrate that freedom of the press is the most important right of Americans.
 - B. show that America’s founders did not invent freedom of the press.

- C. indicate that though freedom of the press is an important right, its boundaries are always changing.
- D. describe the effect of the press on U.S. wars.

12. John Peter Zenger was found not guilty for printing articles that criticized the royal governor of New York because:
- F. he didn’t write the articles.
 - G. he was protected under the U.S. Constitution.
 - H. the governor forgave him.
 - J. his criticisms of the governor were true.
13. Based on the information in this passage, who did NOT act as an advocate for freedom of the press?
- A. Thomas Jefferson
 - B. John Peter Zenger
 - C. John Adams
 - D. Charles Schenck
14. The John Peter Zenger trial is significant to American history because:
- F. it defined when the press could be censored.
 - G. Zenger was the nation’s leading journalist.
 - H. the trial recognized freedom of the press as a critical right.
 - J. his criticisms of the royal governor demonstrated that America should seek freedom from England.
15. Why does the U.S. government often block the freedom of the press during wartime?
- A. Reading about what really happens during wartime might frighten people.
 - B. The enemy might learn American troop plans, putting soldiers in even more danger.
 - C. Americans have the right to know only what the government wants them to know.
 - D. Reporters are not soldiers, so they do not fully understand what is happening.
16. According to this passage, Congress passed the Sedition Act in 1798:
- E. to prevent advocates of the French from persuading Americans to turn against their government.

- G. to stop French people from immigrating to the United States.
 - H. to show that Congress and the U.S. government were above criticism.
 - J. to end the war against the French.
17. Which is protected by the freedom of the press?
- A. Obscenity
 - B. Purposely harming another person's reputation
 - C. Speaking out against government
 - D. Publication of military secrets
18. Based on the information in this passage, which is NOT a restriction on the press?
- F. Blocking or deleting information that may be considered harmful
 - G. Setting guidelines for what reporters can and cannot write about during wartime
- H. Refusing to allow reporters to accompany troops
 - J. Printing libelous information criticizing the government
19. According to this article, freedom of the press is:
- A. a right that can never be denied.
 - B. constantly being redefined.
 - C. dangerous to the safety of Americans.
 - D. designed to protect newspaper publishers, not writers.
20. A free press behaves responsibly:
- F. because someone who criticizes the government can be acquitted by a jury.
 - G. when reporters refrain from reporting information that can endanger Americans.
 - H. if reporters never write anything obscene.
 - J. if reporters never include libelous statements in their articles.

PASSAGE III

HUMANITIES: This passage is from *Western Civilization* by Gerson Antell and Walter Harris.

The artists of the Italian Renaissance may be said to have captured the spirit of humanism in paint, marble, and bronze. In doing so, they studied anatomy and returned to an idealization of the human body like that which appears in Greek sculpture.

Giotto, who lived from 1276 to 1336, is considered the first Renaissance painter. Though his frescoes retained some of the stiffness of medieval works, his figures are full of human feeling. His compositions are dramatic in their groupings of figures. And, by varying the intensity of his colors from bright to dark, Giotto gives both people and settings a lifelike quality.

Another early realist, Masaccio, was influenced by Giotto. The monumental figures in his wall paintings—done early in the fifteenth century—seem to have been carved

from stone. Unlike those of Giotto, however, they are creatures of flesh and blood. Masaccio was one of the first painters to master perspective—the representation of three dimensions on a two-dimensional surface so that distance and distant objects appear as they would to the eye.

The late fifteenth and early sixteenth centuries witnessed such a flowering of art that this period is called the High Renaissance. The four greatest Italian artists of this period were Leonardo da Vinci, Michelangelo, Raphael, and Titian.

Leonardo da Vinci came closer to being an all-round genius than any other person in history. Born in 1452, he designed a flying machine, lathes, pumps, and weapons. His notebooks contain accurate drawings of a human embryo and of human muscles and organs. Leonardo's most famous painting, *Mona Lisa*, shows a lovely woman with a mysterious smile. Everything in the painting

seems to be seen through a slight haze. The wall painting *The Last Supper* is often called Leonardo's greatest work. The figure of Christ is isolated at the center. He has just told the disciples, "One of you shall betray me," and all of the emotions that this statement evoked can be seen in their faces and gestures.

Michelangelo Buonarroti, like Leonardo, was a man of wide-ranging talents. His masterpiece is the huge painting on the ceiling of the Sistine Chapel in the Vatican. For more than four years, from 1508 to 1512, Michelangelo lay on his back and worked night and day. The result was the biblical story of Genesis, from the Creation to the Flood. Twenty-two years later, he painted the *The Last Judgment*, which covers the great wall behind the altar of the Sistine Chapel.

Michelangelo was also a great sculptor, possibly the greatest of the Renaissance. He made marble come to life in his youthful *David*, in the sorrowful *Pietà*, and in his mighty statue of Moses, the majestic law-giver.

Raphael Santi, while not an innovator, had the ability to select and adapt what he had learned from others and to impart to his paintings a fresh and lasting beauty. His figures are as powerful as those on the Sistine ceiling. And his paintings of the Madonna exhibit a dignified yet appealing womanly beauty.

Titian, or Tiziano Vecelli, was probably the greatest Venetian painter of the Renaissance. His use of color was unsurpassed. He painted landscapes, portraits, and historical and mythological scenes. The viewer always sees real men and women, vital and alive. Titian, unlike Leonardo and Michelangelo, painted in oils on canvas. This technique gave artists greater freedom to correct, refine, and add dimension and depth to their paintings.

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21. According to the passage, the admiration and idealization of the human form reflected the same trends in:
- A. Egyptian mummies.
 - B. American art.
 - C. Byzantine paintings.
 - D. Greek sculpture.
22. Which was NOT a Renaissance artist?
- F. Mona Lisa
 - G. Raphael
 - H. Titian
 - J. Giotto
23. According to this passage, Leonardo da Vinci was:
- A. an artist.
 - B. a scientist.
 - C. an inventor.
 - D. all of the above.
24. When the authors of this passage note that Masaccio mastered "perspective" in his art, they mean that Masaccio:
- F. had an objective viewpoint of his subjects.
 - G. viewed things differently from his peers.
 - H. created paintings that looked as though they were three-dimensional.
 - J. created only three-dimensional art.
25. According to the information presented in the passage, an important subject for most artists of the Renaissance was:
- A. self-portraits.
 - B. buildings.
 - C. science.
 - D. biblical stories.
26. Raphael was best known for:
- F. his brilliant colors.
 - G. his innovative painting style.
 - H. his use of clay.
 - J. his adaptation of skills he learned to impart new beauty in his art.
27. The technique NOT mentioned in this discussion of Renaissance art is:
- A. pastels.
 - B. sculpture.
 - C. frescoes.
 - D. oil painting.

28. Because Giotto had not mastered perspective, the people in his paintings are:
- F. realistic.
 - G. flat.
 - H. unpleasant.
 - J. dark.
29. Based on the information in this passage, the period called the High Renaissance took place during:
- A. the late 1400s and early 1500s.
 - B. the late 1300s and early 1400s.

- C. the late 1500s and early 1600s.
- D. the late 1200s and early 1300s.

30. The main point in this passage is that:
- F. the Renaissance began with Giotto's art.
 - G. many beautiful works of art as well as artistic advances were made in the Renaissance.
 - H. Leonardo da Vinci designed the first airplane.
 - J. Titian should be known as the greatest Renaissance painter.

PASSAGE IV

NATURAL SCIENCE: This passage is from *Chemistry: A Contemporary Approach* by Paul S. Cohen.

The Modern Periodic Table

The work set in motion by the Mendeleev–Meyer system of classification led to further developments during the latter half of the 19th century. By 1900 the noble gas elements—helium, neon, argon, xenon, and krypton—had been discovered and added to the table. One problem, however, was as yet unresolved. Why did a few elements, when grouped by atomic mass, fail to appear in their proper places?

This problem was finally resolved in 1913, when a 26-year-old English physicist, Henry Moseley, was able to determine the atomic number of each of the elements. When the elements were grouped by atomic number, instead of by atomic mass, every element fell into its proper group, with elements of similar properties. Thus the periodic law was revised, and the development of the modern periodic table was possible.

The *revised periodic law* states: The properties of the elements are periodic functions of their atomic numbers. Recall that the atomic number indicates the number of protons, and also of electrons, in an atom. In other words, when the elements are arranged

in order of increasing atomic number, the properties of the elements repeat regularly. For example, in this arrangement, argon (atomic number 18) precedes potassium (atomic number 19), which has a lower atomic mass than argon. The same reversal of order occurs with cobalt and nickel and with tellurium and iodine. The properties of these pairs of elements now fall into place.

Organization of the Periodic Table

The modern periodic table arranges the elements in order of increasing atomic number. The elements fall into horizontal rows and vertical columns. Horizontal rows, called periods, are labeled 1, 2, 3 and . . . Vertical columns, called groups or families, are labeled with Roman numerals and letters, such as IIA and IIB. The subgroups became the Group B elements, while the main groups became the Group A elements.

A final change in the periodic table was made by the International Union of Pure and Applied Chemistry. The A and B designations were discarded entirely, and the groups were simply numbered consecutively, from 1 to 18. The A group elements are now often called the “representative elements,” while the elements in the B groups are called “transition elements.”

55 Since both forms of the periodic table are commonly used by chemists, the table we use gives both the old designations and the new designations for the groups on the table.

60 Atomic masses are shown below atomic numbers in the table. Atomic masses are based on the carbon-12 standard—that is, the masses are determined on a scale in which the most common isotope of carbon is assigned a mass of exactly 12.00. The mass numbers reflect the weighted average of the naturally occurring isotopes.

70 On some periodic tables, the electron configuration of an atom is also given for each element. In addition, the covalent atomic radius and the relative size of an atom may be provided. This information applies to some of the periodic properties of the elements.

75 In our table, as in most periodic tables now in use, the row of elements 58–71 (lanthanides) and the row of elements 90–103 (actinides) appear separately at the bottom. This placement makes it easier to follow the regularities of all the other elements.

The Periodic Table

1 IA		TRANSITION ELEMENTS										13 III A					14 IV A					15 V A					16 VI A					17 VII A					18 O	
1	H 1.008	2											5	B 10.81	6	C 12.01	7	N 14.01	8	O 16.00	9	F 19.00	10	Ne 20.18						18	He 4.003							
2	3 Li 6.941	4											13	Al 26.98	14	Si 28.09	15	P 30.97	16	S 32.07	17	Cl 35.45	18	Ar 39.95														
3	11 Na 22.99	12	3 III B	4 IV B	5 V B	6 VI B	7 VII B	8	9 VIII B	10	11 I B	12	II B						13	Al 26.98	14	Si 28.09	15	P 30.97	16	S 32.07	17	Cl 35.45	18	Ar 39.95								
4	19 K 39.10	20	Ca 40.08	21	Sc 44.96	22	Ti 47.88	23	V 50.94	24	Cr 52.00	25	Mn 54.94	26	Fe 55.85	27	Co 58.93	28	Ni 58.69	29	Cu 63.55	30	Zn 65.39	31	Ga 69.72	32	Ge 72.61	33	As 74.92	34	Se 78.96	35	Br 79.90	36	Kr 83.80			
5	37 Rb 85.47	38	Sr 87.62	39	Y 88.91	40	Zr 91.22	41	Nb 92.91	42	Mo 95.94	43	(98)	44	Tc 101.1	45	Rh 102.9	46	Pd 106.4	47	Ag 107.9	48	Cd 112.4	49	In 114.8	50	Sn 118.7	51	Sb 121.8	52	Te 127.6	53	I 126.9	54	Xe 131.3			
6	55 Cs 132.9	56	Ba 137.3	57	La 138.9	72	Hf 178.5	73	Ta 181.0	74	W 183.8	75	Re 186.2	76	Os 190.2	77	Ir 192.2	78	Pt 195.1	79	Au 197.0	80	Hg 200.6	81	Tl 204.4	82	Pb 207.2	83	Bi 209.0	84	Po (209)	85	At (210)	86	Rn (222)			
7	87 Fr (223)	88	Ra 226.0	89	Ac 227.0	104	Rf (261)	105	Db (262)	106	Sg (263)	107	Bh (262)	108	Hs (265)	109	Mt (268)	110	Ds (281)	111	Rg (272)	112	Cn (285)	113	Uut (284)	114	Uuq (289)	115	Uup (286)	116	Uuh (292)	117	Uus	118	Uuo (294)			
P E R I O D		58	59	60	61	62	63	64	65	66	67	68	69	70	71	LANTHANIDE SERIES																						
		Ce 140.1	Pr 140.9	Nd 144.2	Pm (145)	Sm 150.4	Eu 152.0	Gd 157.3	Tb 158.9	Dy 162.5	Ho 164.9	Er 167.3	Tm 168.9	Yb 173.0	Lu 175.0																							
		90	91	92	93	94	95	96	97	98	99	100	101	102	103	ACTINIDE SERIES																						
		Th 232.0	Pa 231.0	U 238.0	Np 237.0	Pu (244)	Am (243)	Cm (247)	Bk (247)	Cf (251)	Es (252)	Fm (257)	Md (258)	No (259)	Lr (260)																							

31. The periodic table was revised in the early 20th-century because:
- A. the Mendeleev-Meyer system covered all the important information.
 - B. scientists felt that all the periodic elements needed to be updated.
 - C. Henry Moseley discovered that the original table was incorrect.
 - D. not all of the elements adhered to the properties that they were categorized by in the previous periodic table.
32. According to this passage, which element is NOT a noble gas?
- F. Oxygen
 - G. Helium
 - H. Krypton
 - J. Neon
33. The atomic number of an element is determined by:
- A. weighing the element.
 - B. counting the number of atoms in an element.
 - C. examining the number of protons and electrons in an element.
 - D. squaring the atomic mass.
34. The main idea of lines 14–18 is:
- F. atomic mass is the best way to group the periodic elements.
 - G. English scientists were far advanced in the field of physics.
 - H. determining the atomic number of an element allows scientists to group together elements with similar properties.
 - J. The Mendeleev–Meyer system was completely wrong.
35. What is the suggested connection between the revised periodic law and the revised periodic table?
- A. The revised table clearly describes this revised law.
 - B. Following the revised periodic law, the revised table groups the elements by their atomic number.
 - C. They both use Roman numerals.
 - D. The law does not apply to the lanthanide and actinide series.
36. According to this passage, what is the connection between atomic number and atomic mass?
- F. They are always the same.
 - G. Elements arranged in order of their atomic number are also arranged in order of their atomic mass.
 - H. An element’s atomic mass can change, but the atomic number remains the same.
 - J. The passage draws no clear connection between these two properties.
37. The name that describes the horizontal rows on the revised periodic table is:
- A. groups.
 - B. families.
 - C. periods.
 - D. series.
38. This passage suggests that the A and B designations for elements are still reflected on the table, even though these designations have been replaced by the terms “representative elements” and “transition elements,” because:
- F. some scientists prefer the older designations.
 - G. the old designations are more descriptive than the new designations.
 - H. you can’t understand one designation without the other.
 - J. the Mendeleev-Meyer-Moseley system uses both designations.
39. The row of elements 58–71 (lanthanides) and the row of elements 90–103 (actinides) are set apart from the rest of the table because:
- A. they are radioactive.
 - B. they do not conform well to the properties of the other elements.
 - C. these are the most important elements.
 - D. they were discovered later than the other elements.
40. No information is given in this passage or periodic table about:
- F. noble gases.
 - G. the carbon-12 standard.
 - H. relative size.
 - J. half-life.

Diagnostic Reading Checklist

Answer	Check if Missed	Social Studies/ Sciences	Arts/ Literature	Answer	Check if Missed	Social Studies/ Sciences	Arts/ Literature
1. D	<input type="checkbox"/>		<input type="checkbox"/>	21. D	<input type="checkbox"/>		<input type="checkbox"/>
2. H	<input type="checkbox"/>		<input type="checkbox"/>	22. F	<input type="checkbox"/>		<input type="checkbox"/>
3. A	<input type="checkbox"/>		<input type="checkbox"/>	23. D	<input type="checkbox"/>		<input type="checkbox"/>
4. J	<input type="checkbox"/>		<input type="checkbox"/>	24. H	<input type="checkbox"/>		<input type="checkbox"/>
5. B	<input type="checkbox"/>		<input type="checkbox"/>	25. D	<input type="checkbox"/>		<input type="checkbox"/>
6. G	<input type="checkbox"/>		<input type="checkbox"/>	26. J	<input type="checkbox"/>		<input type="checkbox"/>
7. B	<input type="checkbox"/>		<input type="checkbox"/>	27. A	<input type="checkbox"/>		<input type="checkbox"/>
8. G	<input type="checkbox"/>		<input type="checkbox"/>	28. G	<input type="checkbox"/>		<input type="checkbox"/>
9. B	<input type="checkbox"/>		<input type="checkbox"/>	29. A	<input type="checkbox"/>		<input type="checkbox"/>
10. H	<input type="checkbox"/>		<input type="checkbox"/>	30. G	<input type="checkbox"/>		<input type="checkbox"/>
11. C	<input type="checkbox"/>	<input type="checkbox"/>		31. D	<input type="checkbox"/>	<input type="checkbox"/>	
12. J	<input type="checkbox"/>	<input type="checkbox"/>		32. F	<input type="checkbox"/>	<input type="checkbox"/>	
13. C	<input type="checkbox"/>	<input type="checkbox"/>		33. C	<input type="checkbox"/>	<input type="checkbox"/>	
14. H	<input type="checkbox"/>	<input type="checkbox"/>		34. H	<input type="checkbox"/>	<input type="checkbox"/>	
15. B	<input type="checkbox"/>	<input type="checkbox"/>		35. B	<input type="checkbox"/>	<input type="checkbox"/>	
16. F	<input type="checkbox"/>	<input type="checkbox"/>		36. J	<input type="checkbox"/>	<input type="checkbox"/>	
17. C	<input type="checkbox"/>	<input type="checkbox"/>		37. C	<input type="checkbox"/>	<input type="checkbox"/>	
18. J	<input type="checkbox"/>	<input type="checkbox"/>		38. F	<input type="checkbox"/>	<input type="checkbox"/>	
19. B	<input type="checkbox"/>	<input type="checkbox"/>		39. B	<input type="checkbox"/>	<input type="checkbox"/>	
20. G	<input type="checkbox"/>	<input type="checkbox"/>		40. J	<input type="checkbox"/>	<input type="checkbox"/>	

Number Correct:

Social Studies/Sciences _____

Arts/Literature _____

Total _____

Review the answer explanations on the following pages. Then go back to the items you missed. Apply the four steps on page 215 to find out how the steps lead you to the correct answers.

Diagnostic Reading ACT Answers Explained

PASSAGE I

1. D

The passage mentions all four locations, but the first sentence of paragraph 2 says that the setting is Santa Clara Valley.

2. H

The author says (line 7) that men “had found a yellow metal.” The men searching for the gold needed strong work dogs to assist them, as the passage states: “the dogs they wanted were heavy dogs, with strong muscles by which to toil” (lines 11–13).

3. A

According to the passage, Buck is the favored dog on Judge Miller’s estate. He is “king” over everyone on the estate; “The whole realm [was] his.”

4. J

No threatening, frightening, or otherwise negative words are used to describe Judge Miller’s place. Judge Miller’s place has a warm climate. The area is “sun-kissed,” and the children use a pool to keep cool. There is a lot of land, a “great demesne” covered with orchards and trees. There are stables and servants’ quarters.

5. B

The passage implies that because of his favored status and his physical strength, Buck appeared to have control over everyone. As far as Buck is concerned, the other dogs “don’t count.” Buck is his real name. He has not fathered any puppies.

6. G

The passage describes them as a Japanese pug and a Mexican hairless, two different breeds of dogs. Since they are of different breeds, Buck and these two dogs cannot be related. Since Buck “utterly ignored” (line 65) these two dogs, they are not his best friends. Judge Miller’s daughters are Mollie and Alice.

7. B

Buck goes hunting and swimming, and he plays with and protects the Judge’s daughters and grandsons. He is not lazy or lonely. Paragraph 5 says that Buck was not pampered.

8. G

The first paragraph indicates that “trouble was brewing . . . for every tidewater dog, strong of muscle and with warm, long hair. . . .” The later description of

Buck indicates that he is strong and furry, which gives the reader a sense of foreboding about Buck’s situation.

9. B

The opening paragraph indicates that there will be trouble for Buck; the last two paragraphs confirm this, describing how Buck is removed from his happy and comfortable life.

10. H

The implication is that Manuel commits an act of treachery by selling Buck to get money to pay off his gambling debt. Manuel is not paying for services or buying supplies. On the contrary, he is receiving money for Buck.

PASSAGE II

11. C

This passage discusses how the freedom of the press has fluctuated in America. It does not state that this is Americans’ most important right, but it does state that the founding fathers did not invent the right. Most often, these fluctuations stem from wartime decisions; however, these wars are not the focus of the passage.

12. J

Because Zenger told the truth in his articles, the jury decided that he should be acquitted. Since there was not yet a U.S. Constitution, he was being protected under British (not American) rule. It was not the governor who forgave him, but President Jefferson.

13. C

The passage lists each person in the answer except John Adams as exerting the rights of freedom of the press. Of those listed, only John Adams is noted for acting against freedom of the press, by signing into law the Alien and Sedition Acts.

14. H

This was the first case in America that supported freedom of the press. There is no information in the passage to indicate that F, G, or J is true.

15. B

According to this passage, there was concern that information could endanger the secrecy of missions, reveal information about troop movements, and otherwise endanger the war effort.

16. F

Because of the wartime situation, John Adams and Congress wanted to stifle any anti-American, pro-French writing. The Alien Acts prevented the immigration of more French to the United States. The Sedition Act simply prevented anyone from speaking out against the government. The passage does not contain any statement to support either H or J.

17. C

Choices A, B, and D are all things that should not be published; therefore, they are not protected (or allowed) by freedom of the press. Since the Sedition Act was revoked in 1801, citizens of the United States have had the right to speak out against the American—or any other—government.

18. J

The first three choices are all examples of cases where the freedom of the press was not violated. However, printing libelous information is not considered freedom of the press.

19. B

The authors state (lines 91–92) that freedom of the press is constantly being redefined. The remainder of the passage gives examples that support this statement.

20. G

In describing U.S. censorship, the authors note that many reporters were not censored during World War II because they made sure not to give out information that would endanger the troops (lines 70–74). Choice F is more like an excuse for a press that behaves irresponsibly. While it may be true that a responsible press would not print obscenities or libel, neither of these is broad enough to define that responsibility as a whole.

PASSAGE III**21. D**

The authors note (lines 3–6) that Renaissance art is reflective of Greek sculpture.

22. F

Mona Lisa is the subject of one of Leonardo da Vinci's most famous paintings, not an artist herself.

23. D

Leonardo da Vinci was a true “Renaissance man.” In other words, he was skilled in many areas. The authors note many of Leonardo's achievements in fields other than art.

24. H

The authors discuss perspective as distinguishing the spatial relationship of objects. Masaccio's paintings were advanced because he could make a two-dimensional surface appear to be three-dimensional.

25. D

In this passage, much of the art discussed reflects religious themes, like Leonardo's *The Last Supper*, Michelangelo's work at the Sistine Chapel, and Raphael's *Madonna*.

26. J

According to the authors, Raphael was not an innovator. Instead, he adapted the skills he learned from others to paint powerful and beautiful pictures. The passage states that other painters used bold colors but does not say this of Raphael. It also does not mention Raphael using clay.

27. A

Giotto is known for fresco, Michelangelo for sculpture, and Titian for oil painting. Pastel may have been used, but it is not mentioned in this article.

28. G

Because his paintings were not “three-dimensional,” Giotto's figures are described as “stiff” as opposed to Masaccio, whose figures are “creatures of flesh and blood.”

29. A

The late fifteenth and early sixteenth centuries witnessed the High Renaissance. These centuries correspond with the late 1400s and early 1500s.

30. G

The authors describe the best artists, their works, and their artistic advances. While the other statements may or may not be true, they are supporting details, not the main point of the passage.

PASSAGE IV**31. D**

The author indicates (lines 9–10) that, under the rules of the old table, some elements failed to “appear in their proper places.” In lines 14–18, the author indicates that in Henry Moseley's table, “every element fell into its proper group.”

32. F

Oxygen is a gas, but only helium, krypton, argon, xenon, and neon are noble gases.

33. C

The author notes (lines 23–25) that the atomic number indicates the number of protons and electrons in an atom.

34. H

Elements ordered by atomic number, *not by atomic mass*, fall into groups with other elements with similar properties. The Mendeleev-Meyer system was not wrong; it just did not answer all questions.

35. B

In the third paragraph, the author defines the revised periodic law: “The properties of the elements are periodic functions of their atomic numbers.” Two sentences later, he notes that when “the elements are arranged in order of increasing atomic number, the properties of the elements repeat regularly.” You can infer that the table, which reflects the revised periodic law, arranges the elements in order of increasing atomic number. Lines 36–78 also describe the arrangement of the periodic table.

36. J

Whether or not there is a concrete connection between these two concepts is not strongly indicated in this passage. Clearly, atomic mass and atomic number are not always the same; if they were, the old periodic table would have worked as well as the revised table. The author notes that, occasionally, elements with higher atomic masses are placed before elements with lower atomic masses.

37. C

The author notes (lines 39–40) that horizontal rows are called periods, while vertical columns are called groups, or families. This is reinforced by the notation on the periodic table, which labels the horizontal rows as periods.

38. F

Lines 55–58 indicate that both the A and B designations as well as the “representative” and “transition” designations are commonly used by modern scientists. Therefore, both designations are preserved. There is no such thing as the Mendeleev-Meyer-Moseley system.

39. B

The author notes (lines 73–78) that these rows appear separately to make it “easier to follow the regularities of all the other elements.” This statement implies that the rows set aside do not show the regularities of other elements in the table. There is no indication that these elements are any more important or more recently discovered than the other elements in the table, and there is no mention of radioactivity in the passage.

40. J

Noble gases, the carbon-12 standard, and relative size are all mentioned in the article. There is no mention of half-life.