STUDENT NAME _____

TAKS
Texas Assessment of Knowledge and Skills

GRADE 10
ENGLISH LANGUAGE ARTS
MATHEMATICS
SOCIAL STUDIES
SCIENCE

Administered Spring 2004

READING
AND
WRITTEN
COMPOSITION

Read the two selections and the viewing and representing piece. Then answer the questions that follow.

Sunny Days and Sunny Nights

by M. E. Kerr

My notes about what I am reading

1   "Females prefer chunky peanut butter over smooth, forty-three percent to thirty-nine percent," Alan announces at dinner, "while men show an equal liking for both."

2   My father likes this conversation. I think even my mother does, since she is telling Alan enthusiastically that she likes smooth. Moments before she confided that she preferred red wine, after Alan said that women are more likely than men to order wine in a restaurant, and a majority prefer white.

3   Alan is filled with this sort of information.

4   He wants to become an advertising man. He is enrolled in journalism school for that purpose. He's my height, when I'm wearing heels, has brown hair and brown eyes, lives not far away in Salisbury, North Carolina. We go out mostly to hit movies, and he explains their appeal afterward, over coffee at a campus hangout. He prides himself on knowing what sells, and why, and what motivates people. Sometimes when we kiss, I imagine he knows exactly what percentage of females close their eyes, and if more males keep theirs open.

5   I long for Sunny.

6   Whenever Sunny came to dinner, my father winced at his surfers' talk and asked him pointedly if he had a "real" name. Harold, Sunny would tell him, and my father would say, that's not such a bad name, you can make Harry out of that, and once he came right out and told Sunny that a man shouldn't have a boy's name.

7   When Sunny finally joined the Navy my father said, well, they'll make a man out of him.

8   He's a man, I said, believe me. Look at him and tell me he's not a man. Because Sunny towers over my father, has a Rambo build, and a walk, smile, and way about him that oozes confidence. Hair the color of the sun, deep blue eyes. Always tanned, always. Even my mother murmured, oh, he's a man, Sunny is.

9   But my father shook his head and said, I don't mean *that*. I mean the boy has a boy's ambition, you only have to listen to all that talk about the big waves, the surf, the beach—either he's a boy or a fish, but he's not someone with his eye on the future. He's not someone thinking about a profession!

GO ON

10   One of the hard things about going to college in your hometown is that your family meets your dates right away. If I had the good luck to live in a dorm, my father couldn't cross-examine all of them while I finish dressing and get myself downstairs. Even when I'm ready ahead of time, he manages to squeeze out as much information about them as he can, once he's shaken hands with one, and while we're standing there looking for our exit line.

11   He likes Alan right away.

12   After dinner is over, while Alan and I go for a walk, Alan says, "I really like your family. Did they like me, do you think?"

13   "I know they did."

14   But my mother never once threw her head back and laughed, the way she used to when Sunny was at the table, never said, oh *you!* to Alan, like someone trying hard not to love his teasing—no one ever teased her but Sunny.

15   He'd tell her she looked like Princess Di (maybe . . . a little) and he'd often exclaim, you've made my day, darlin'! when he'd taste her special fried chicken. My father calls her Kate or Mama, and he can't eat anything fried because of the cholesterol, but they've been rocking together on our front porch through twenty years of marriage, and he *does* have a profession: He's a judge.

16   Oh, is he a judge!

17   Sunny, he said once when Sunny alluded to a future with me, every Friday noon Marybeth's mother comes down to my office and we go out to lunch. It's a ritual with us: I get to show her off to my colleagues, and we stroll over to the hotel, enjoy an old-fashioned, have the special-of-the-day, and set aside that time for us. . . . I hope someday my daughter will be going down to her own husband's place of business to do the exact same thing.

18   Later Sunny said, He wasn't kidding, was he?

19   Him? I said. Kid? I said.

20   It was a week to the day that Sunny asked me to marry him. We were just graduated from high school. I was already planning my courses at the university when Sunny got wind of a job in Santa Monica, running a shop called Sun & Surf. Sunny'd moved from California when his folks broke up. His mom brought him back to Greenville, where she waited table in his grandfather's diner. . . . I never

knew what Sunny's father did for a living, but my father, who spent a lot of time trying to worm it out of Sunny, said it sounded as though he was a "common laborer." Can't he be just a laborer? I said. Does he have to be a common one?

21   Marybeth, said my father, I'm just looking out for you. I like the boy. He's a nice boy. But we're talking here about the whole picture. . . . Does Sunny ever mention college?

22   I want to go to college, I told Sunny.

23   You can go out on the coast somewhere.

24   How? Daddy won't pay for it if we get married.

25   We'll figure out something.

26   It's too vague, Sunny, and too soon.

27   What's vague about it?

28   Don't *you* want to go to college, Sunny? Don't *you* want a profession?

29   Sunny said he couldn't believe I felt the way my father did, in the letter he left with my mother for me. He said the Navy was his best bet, and at least he'd be on water. He didn't say anything about waiting for him, or writing—nothing about the future. I'd said some other things that last night together, after he'd made fun of my father's talk about my parents' Friday-noon ritual. They don't even touch, he'd said: I've never once seen them touch, or heard them use affectionate names, or laugh together. So she shows up at his office once a week—big deal! . . . Honey, we've got a love that'd like to bust through the roof! You don't want to just settle for something like they did! They settled!

30   They love each other, I argued back, it just doesn't show. . . . Sunny said that was like plastic over wood, and love should splinter, crack, and burn!

31   You know how it is when someone criticizes your family, even when you might have thought and said the same things. You strike out when you hear it from another mouth, say things you don't mean, or you do, and wouldn't have said under any other circumstances.

32   I said, at least my father could always take care of my mother! At least he'd made something of himself, and she could be proud of him! That's good enough for me, I said. I knew from the hurt look in Sunny's eyes he was hearing that he wasn't.

33   "Seventy-four percent of American adults are interested in professional football," Alan says as we walk along under the stars. "Eighty-seven percent of men and sixty-three percent of women."

GO ON

34   I can hear Sunny's voice saying blah blah blah blah blah blah blah!

35   "Alan," I say, "what kind of office does an advertising man have?"

36   "Mine's going to be in New York City, and there'll be a thick rug on the floor, and a view of the whole Manhattan skyline from the windows. Do you like New York, Marybeth?"

37   "Anyplace but here!" I answer. "I'd like to get out of the South! I'd like to live near an ocean." I was picturing Sunny coming in on a big wave out in California. "I'd like to always be tanned."

38   Alan shakes his head. "That's out of style now. The ozone layer and all. White skin is in. No one wants a tan anymore."

39   When we get to the curb, Alan puts his hand under my arm and remarks, "You smell good. What perfume is that?"

40   "I don't remember what I put on." I was thinking of nights with Sunny we'd walk down this street with our arms wrapped around each other, and Sunny'd say, let's name our kids. Say we have four, two girls and two boys. You get to name a boy and a girl.

41   Alan lets go of my arm when we get across the street.

42   "I like the fact you're majoring in economics," he says. "You could go into investment banking. New York is where *you* want to go too."

43   "Sure, New York," I say. "That's for me."

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44   Next weekend I have a date with John. Premed. Chunky. Beautiful smile. On the porch he tells my father, "I'll take good care of her. Don't worry."

45   "What are you going to specialize in?" My father gets one last question in as we are heading down the steps.

46   "Pediatrics, sir," and John grins and grabs my hand as we walk to his white Pontiac.

47   My mother is sitting in the wicker rocker on the porch, waving at us as we take off.

48   "Nice people," John says.

49   We drive to the SAE[1] house with the top down, the moon just rising. "Your family reminds me of mine," he says. "Your mom so warm and welcoming, and your dad all

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[1] SAE (Sigma Alpha Epsilon)—a popular fraternity on campus

concerned about me. . . . My father's that way about my kid sister when boys come to take her out. I don't have a lot of time to date, so I like dating someone whose family I can meet. You can tell a lot about a girl by her folks."

50   "They never touch," I tell him. "I mean, not openly."

51   "Like mine. You watch mine and you wonder how two kids got born."

52   We look at each other and laugh.

53   I like him. His wit, his good manners, his dancing, even his "shop talk" about his premed courses. He is a good listener, too, questioning me about what I'm studying, my ideas; he is the perfect date.

54   "Did you have a good time, sweetheart?" my mother asks.

55   "So-so." I tell the truth.

56   "In that case I hate to tell you what's on the hall table."

57   It's an overnight letter from Western Union. Short and sweet.

58   ARRIVING TOMORROW NIGHT. HAVE PROFESSION AND HIGH HOPES. LOVE, HAROLD.

59   "He's coming back, isn't he?" Mom says.

60   I show it to her.

61   "You like him, Mom, so why did you hate to tell me about this?"

62   "I like him a lot, but I don't think your father's ever going to resign himself to Sunny, even if he does call himself Harold."

63   "He has a profession, he says!" I am dancing around the room, hugging the letter. "He has high hopes!"

64   "I think he's the same old Sunny, honey, and I think it's just going to be more heartbreak. Oh, I *do* like him. Truly I do. But you started seeing Alan and John. You took a step away from Sunny."

65   "Just give him a chance, Mom."

66   "Give who a chance?" my father's voice.

67   He is coming into the living room in his robe and pajamas.

68   "Harold!" I exclaim. "Just give Harold a chance!"

69   "We used to chant 'Give peace a chance,' when I was in college," my father says, "and I'd say Sunny having a

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chance is like peace having a chance. Peace being what it is, and Sunny being what he is, no chance will do much to change things. Won't last. . . . Now, John is a young man I really warm to. Did you have a good time with John?"

70   "He was the perfect date," I answer.

71   "You said it was a so-so time," says my mother.

72   "Maybe I'm not into perfection."

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73   When I meet the little plane that flies from Charlotte to Greenville, I can see Sunny getting off first, lugging his duffel bag, dressed in his Navy uniform, hurrying through the rain, tan as anything, tall, and grinning even before he can spot me in the small crowd.

74   He has a box of candy—"Not for you, my love," he says, "it's for your mama." Then he kisses me, hugs me, hangs on hard and whispers, "Let's name our kids. Say we've got six, all boys, first one's Harold junior. We could call him Harry."

75   There is no way I can get him to talk about his profession on the way home in my father's Buick. He says he is going to tell me at the same time he tells my folks, that all we are going to talk about on the way there is how soon I can transfer to the university near the base. He has three more years in the Navy and an application for reduced tuition for Navy wives, providing I still love him the way he loves me, do I? . . . *Yes?* Okay!

76   He says, "Park the car somewhere fast before we go straight home, because we've got to get the fire burning lower, or we'll scorch your loved ones." Here's a place.

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77   My father growls, "One *hour* getting back here from the airport, was the traffic *that* bad on a weeknight? We thought you'd had an accident. . . ." And my mother purrs, "Guess what's cooking?"

78   "Fried chicken!" Harold cries, sounding like the same old Sunny. "Darlin', you have made my day! Love you and want some huggin' from my one and only!"

79   "Oh, *you*!" my mother says.

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80   It does not take my father long to start in; he starts in at the same time he picks up his fork.

81   "What's this about a profession, Sunny? Harold?"

82   "Yes, sir, I am a professional man now."

GO ON

83   "You're becoming a professional sailor, is that it?"

84   "No, sir. I'm leaving the Navy eventually, but thanks to the Navy, I now have a profession that suits me."

85   "Which is?"

86   "I'm an underwater welder."

87   "Let's eat before we get into all this," says my mother, fast.

88   "You're a *what*?"

89   "An underwater welder."

90   My father begins to sputter about Alan, who is going into advertising, and John, the aspiring baby doctor, those are professions, but what kind of . . . what kind of . . .

91   And my mother is passing the gravy, passing the cranberry relish, the biscuits, keeping her hands flying between the table and Sunny.

92   "Where will you, where will . . ." my father again, and if he ever finishes the sentence, I don't know. For I am seeing Sunny see me. I am seeing him be true to me and to himself. Perhaps my father wants to ask where will you do this, where will your office be, for my father is one to think in terms of a man's workplace.

93   But I am drifting in my thoughts to future Fridays, traditional and loving, donning a wet suit for a rendezvous in the deep blue sea. Keeping my date with that warm fish I married.

GO ON

from

Newcomers in a Troubled Land

by Naomi Shihab Nye

1   Our four-year-old is printing his name on a piece of yellow construction paper. I bend to see which name it is today. For awhile he wanted to be *called* Paper. Today he's gone back to the real one. Each blocky letter a house, a mountain, a caboose . . . then he prints my name underneath his. He draws squiggly lines from the letters in my name to the same letters in his own. "Naomi, look, we're inside one another, did you know that? Your name is here, inside mine!"

2   Every letter of *Naomi* is contained in his name *Madison*—we pause together, mouths open. I did not know that. Although we have been mouthing one another's names for years, and already as mother and son we contain one another in so many ways it would be hard to name them all.

3   For a long time he sits staring, smiling at the paper, turning it around on the table. "Do I have any friends," he asks, "who have *their* mother's names inside their names?" We try a few—none does. And the soft afternoon light falling into the kitchen where we sit says, *this is a gift*.

4   When I was small, the name *Naomi*, which means *pleasant*, seemed hard to live up to. And *Shihab*, *shooting star* or *meteor* in Arabic, harder yet. I never met another of either in those days. My mother, Miriam, whose name meant *bitter*, said I didn't know how lucky I was.

5   Hiking the tree-lined streets of our St. Louis borough en route to school, I felt common names spring up inside my mouth, waving their leafy syllables. I'd tongue them for blocks, trying them on. Susie. Karen. Debbie. Who would I be if I'd had a different name? I turned right on a street called Louise. Did all Karens have some region of being in which they were related? I called my brother *Alan* for a week without letting my parents hear. He was really Adlai, for Adlai Stevenson, a name that also means *justice* in Arabic, if pronounced with enough flourish.

6   Neither of us had middle names.

7   I admired our parents for that. They hadn't tried to pad us or glue us together with any little wad of name stuck in the middle.

8   Not until I was sixteen, slouching sleepily in the back seat of my best friend's sister's car, did I fall in love with my own name. It had something to do with neon on a shopping center sign, that steady color holding firm as the nervous December traffic swarmed past. Holding my eyes to the

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radiant green bars of light as the engine idled at a corner, I felt the soft glow of my own name stretch warmly awake inside me. It balanced on my tongue. It seemed pleasurable, at long last, to feel recognizable to oneself. Was this a secret everyone knew?

9   Names of old countries and towns had always seemed exquisitely arbitrary, odd. The tags in the backs of garments, the plump bodies of words. We had moved from the city of one saint to the city of another, San Antonio, whose oldest inner-city streets had names like *Eager* and *Riddle*. We had left the river of many syllables, with a name long enough to be used as a timing device, Mississippi, for a river so small you could call it Creek or Stream and not be too far off. We ate *kousa*, *tabooleh*, *baba ghannouj*—Arabic food—on a street called Arroya Vista.

10   My husband first appeared to me in a now-vanished downtown San Antonio eatery with a pleasantly understated name, Quinney's Just Good Food. Businessmen in white shirts and ties swarmed around us, woven together by steaming plates of fried fish and mashed potatoes. I knew, from the first moment of our chance encounter, that he was "the one"—it felt like a concussion to know this.

11   Walking up South Presa Street later with my friend Sue, who'd introduced us, I asked dizzily, "What was his last name?" She said, "Nye, like eye," and the rhymes began popping into my head. They matched our steps. Like *hi*, like *why*, like *bye*—suddenly like every word that seemed to matter. She waved at her corner and I stood there a long time, staring as the crossing signal changed back and forth from a red raised hand to a little man walking. And I knew that every street I crossed from that moment on would be a different street.

12   Because I am merely a tenant of this name Nye—it is not the house I always occupied—it inspires a traveler's warm affection in me. I appreciate its brevity. Reading about the thirteenth-century Swedes who fled internal uprisings in their own country to resettle in Denmark in settlements prefixed by *Nye*—meaning new, or newcomer—deserves a border-crosser's nod.

13   Hundreds of families listed in the *Nye Family of America Association* volumes gather regularly at Sandwich, Massachusetts, to shake hands and share each other's lives. I would like to join them, which surprises me. They started their tradition of gathering in 1903. R. Glen Nye writes, "How can we reach you to tell you how important it is for you to know your origins. . . . Those who read this are the oldsters of tomorrow . . . a hundred years hence, we will be the very ones someone will yearn to know about. Who will

GO ON

they turn to then, if we do not help them now?"

14   Because my own father came to New York on the boat from his old country of Palestine in 1950, I am curious about these Nyes who came on the boat just following the *Mayflower*, who stayed and stayed and stayed, who built the Nye Homestead on Cape Cod, now a museum pictured on postcards and stationery notes. They have kept such good track of one another. Thick volumes list them, family by family, birthdates, children, occupations.

15   On a driving trip east, my husband and I paused one blustery day to walk around the cemetery at Sandwich. It felt eerie to sidestep so many imposing granite markers engraved with our own name. Oh Benjamin, oh Katherine and Reuben, you who had no burglar alarms, what did you see that we will never see? And the rest of you Nyes, wandering out across America even as far as Alaska where cars and trucks and jeeps all have their license plates set into little metal frames proclaiming NYE in honor of some enterprising car dealer who claimed the Land of the Midnight Sun as his territory, where did you get your energy? What told you to go?

16   Once my husband and I invited every Nye in the San Antonio telephone book to dinner. Such reckless festivity would have been more difficult had our name been Sánchez or Smith; as it stood, the eleven entries for Nye seemed too provocative to pass up. Eleven groups of people sharing a name within one city—and we didn't know any of them.

17   Handwritten invitation—"If you're named Nye, you're invited." Would they *get it*? I was brazen enough to style it a "potluck"—a gathering where the parties themselves would be a potluck—and asked all to RSVP. A week later each family had responded positively, with glinting curiosity, except one humorless fireman, whom I telephoned at the last minute. He was too busy for such frivolous pursuit.

18   Later I would remember how the picnic table in our backyard spilled a rich offering of pies and green beans and potato salads, how the talk seemed infinite in its variety, how the laughter—"What a wacky idea, Babe!"—some Nye slapping me on the back with sudden gusto—rolled and rolled.

- JUST TELL MY DAD THAT YOU'RE
A BRAIN SURGEON!

1 Read the following dictionary entry for the word *settle*.

settle \set'əl\ *v* **1.** to position so as to stay in one place **2.** to sink gradually to the bottom **3.** to become content with; to compromise **4.** to adjust differences or accounts

Which of the following definitions matches the word *settled* as it appears in paragraph 29 of the story?

A Definition 1

B Definition 2

C Definition 3

D Definition 4

2 The primary purpose of paragraph 17 is to —

F reveal what kind of life Marybeth's father wants for her

G prove how much Marybeth's father loves her mother

H show that Marybeth's father has the characteristics of a good judge

J illustrate that Marybeth's father enjoys giving advice

3 Besides Marybeth, Sunny also loves —

A football

B welding

C the ocean

D advertising

4 Which words from paragraph 17 help the reader understand the meaning of the word *ritual*?

F *show her off*

G *I hope someday*

H *down to my office*

J *every Friday*

5 What does Marybeth's response in paragraph 19 reveal?

A She is trying to avoid answering Sunny's question.

B She is trying to figure out to whom Sunny is referring.

C She thinks that her father is always serious.

D She would rather joke about the situation than discuss it.

6 Why does Sunny respond with figurative language in paragraph 30?

F To prove that most couples attempt to hide their emotions from each other

G To compare romantic love to the feelings that parents have for their children

H To imply that if he and Marybeth get married, they will fight and destroy their love

J To support the idea that his relationship with Marybeth is more affectionate than that of her parents

GO ON

7 What do the actions of Marybeth's mother in paragraph 91 disclose?

    A She wants to convince Sunny to stay by offering him his favorite foods.

    B She doesn't want Sunny to know about Alan and John.

    C She is uncomfortable about the conversation between her husband and Sunny.

    D She wants to give her husband time to respond to Sunny.

8 Which of the following lines best summarizes a theme of the story?

    F *I am seeing him be true to me and to himself.*

    G *He's not someone thinking about a profession!*

    H *I said, at least my father could always take care of my mother!*

    J *Keeping my date with that warm fish I married.*

9 The author develops this story by —

    A relaying the events in the order in which they happened

    B switching back and forth between the past and the present

    C using foreshadowing to hint at what will happen next

    D having the narrator relate events that will happen in the future

10 Why does the author use exclamation points in paragraphs 29 through 32?

    F To highlight Sunny's excitement about joining the Navy

    G To indicate the rising emotion in the argument between Marybeth and Sunny

    H To prove that Marybeth can be stubborn and uncompromising

    J To foreshadow Sunny's marriage proposal to Marybeth

11 In paragraph 92, why doesn't the author show Marybeth's father finishing his sentence?

    A His wife is piling food on his plate.

    B He is embarrassed about Sunny's choice.

    C Marybeth keeps interrupting him.

    D Marybeth is no longer influenced by her father.

GO ON

12 This selection is mainly about —

   F moving to a new place

   G an important event in one's life

   H the significance of names

   J funny things children say

13 In paragraph 16, the word *provocative* means —

   A foolish

   B numerous

   C tempting

   D challenging

14 Paragraphs 13 and 14 are mostly about —

   F R. Glen Nye's letter of invitation to Nye and her family

   G the fact that Nye's father also came to the United States by boat

   H those who built the Nye Homestead, now a museum, on Cape Cod

   J the Nye families' long history of keeping track of one another

15 At the age of 16, the author —

   A moved with her family to San Antonio

   B decided that she would like to be called Susie

   C learned to appreciate her own name

   D met the man that she would soon marry

16 In paragraph 10, the author uses the simile "it felt like a concussion" to express —

   F her excitement in the restaurant

   G the impact of her realization

   H the pain of a new relationship

   J her discomfort at the introduction

17 Which words from paragraph 8 best convey the author's newfound feelings about her name?

   A *slouching, sleepily, idled*

   B *steady, firm, soft*

   C *nervous, swarmed, secret*

   D *radiant, glow, pleasurable*

18 Early in the selection, one internal conflict that the author experiences is her —

F wish to be a good and helpful mother

G struggle against her mother's bitterness

H attempt to live up to her own name

J desire to be more independent

19 In paragraph 12, the author uses the metaphor "it is not the house I always occupied" to show that she —

A had once lived in another town

B was born with a different name

C feels homeless and uncertain

D has become attached to her name

20 The reader can conclude that the author —

F is fascinated by her last name

G would like to change her name

H has always enjoyed her first name

J prefers the name Shihab to Nye

21 The tone of paragraph 18 is —

A somber

B festive

C mysterious

D adventurous

22 Based on the description of the author's experiences in paragraphs 10 and 11, the reader can tell that —

F she will marry a businessman

G her husband will walk her home

H her life has changed forever

J Sue understands the author's feelings

GO ON

23 The reader can conclude that the narrators in both selections —

  A trust their instincts

  B enjoy giving parties

  C think about their names

  D like living near the water

24 The narrators of both selections would probably agree that —

  F their fathers have a lot in common

  G variety makes a family more interesting

  H true love is meant only for young people

  J people should try to live up to their names

25 One sentiment shared by the narrators of the selections is —

  A an anger toward their restrictive parents

  B the joy of learning to appreciate their own names

  C an intensity of feeling for their future husbands

  D the boredom of dating professional men

GO ON

26 The attitude of the girl in the cartoon can best be described as —

F tense

G troubled

H naive

J exhilarated

27 What generalization can you make about the girl's father?

A He is a brain surgeon himself.

B He thinks he may need surgery.

C He encourages his daughter to lie.

D He is concerned about appearances.

28 What is the primary purpose of this cartoon?

F To encourage teenagers to joke with their parents

G To heighten parents' fears about their children's dating

H To stop fathers from making quick judgments

J To show how parents and teens view people differently

GO ON

Answer the following questions in the space provided on the answer document.

29   What is the major conflict that Marybeth experiences in "Sunny Days and Sunny Nights"? Support your answer with evidence from the selection.

30   How does the author's attitude toward her name change over the course of "Newcomers in a Troubled Land"? Support your answer with evidence from the selection.

31   How is the concept of names important in both "Newcomers in a Troubled Land" and "Sunny Days and Sunny Nights"? Support your answer with evidence from **both** selections.

BE SURE YOU HAVE WRITTEN YOUR ANSWERS
ON THE ANSWER DOCUMENT.

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WRITTEN COMPOSITION

Write an essay about the impact another person can have on your life.

The information in the box below will help you remember what you should think about when you write your composition.

REMEMBER—YOU SHOULD

❑ write about the assigned topic

❑ make your writing thoughtful and interesting

❑ make sure that each sentence you write contributes to your composition as a whole

❑ make sure that your ideas are clear and easy for the reader to follow

❑ write about your ideas in depth so that the reader is able to develop a good understanding of what you are saying

❑ proofread your writing to correct errors in spelling, capitalization, punctuation, grammar, and sentence structure

USE THIS PREWRITING PAGE TO
PLAN YOUR COMPOSITION.

MAKE SURE THAT YOU WRITE YOUR COMPOSITION ON
THE TWO LINED PAGES IN THE ANSWER DOCUMENT.

USE THIS PREWRITING PAGE TO
PLAN YOUR COMPOSITION.

MAKE SURE THAT YOU WRITE YOUR COMPOSITION ON
THE TWO LINED PAGES IN THE ANSWER DOCUMENT.

Revising and Editing Sample

DIRECTIONS
Read the introduction and the passage that follows. Then read each question and fill in the correct answer on page 2 of your answer document.

Lydia has written this report for her U.S. history class. As part of a peer conference, you have been asked to read the report and think about what suggestions you would make. When you finish reading the report, answer the questions that follow.

The American Red Cross

(1) The American Red Cross is an organization that aids people all around the world. (2) It started as a result of the efforts of a dedicated woman. (3) That woman was named Clara Barton. (4) It was during the Civil War that Barton began the work that lead to the establishment of the American Red Cross.

(5) She assisted on the battlefield by nursing injured soldiers and helping transport supplies. (6) Eventually the Government of the United States selected her to serve as superintendent of nurses for the army.

S-1 What is the most effective way to combine sentences 2 and 3?

A It started as a result of the efforts of a dedicated woman, that woman was named Clara Barton.

B It started as a result of the efforts of a woman who was dedicated and named Clara Barton.

C It started as a result of the efforts of a dedicated woman named Clara Barton.

D It started as a result of the efforts of a dedicated woman she was named Clara Barton.

S-2 What change, if any, should be made in sentence 4?

F Change *was* to **is**

G Insert a comma after *Civil War*

H Change *lead* to **led**

J Make no change

S-3 What change, if any, should be made in sentence 6?

A Change *Government* to **government**

B Change *selected* to **sellected**

C Change *her* to **herself**

D Make no change

REVISING
AND
EDITING

DO NOT GO ON TO THE REVISING AND EDITING SECTION.
WHEN YOU FINISH THE READING AND WRITTEN
COMPOSITION SECTION, RAISE YOUR HAND AND WAIT
FOR A TEST ADMINISTRATOR TO ASSIST YOU.

STOP

Ramón is writing a paper about his recent visit to a special museum. He has asked you to review his rough draft. As you read the draft, think about the corrections and improvements Ramón should make. When you are finished reading, answer the questions that follow.

The Rock and Roll Hall of Fame and Museum

(1) I love rock music. (2) Therefore, when my father planned a business trip to Cleveland, Ohio I asked to tag along. (3) I had always wanted to visit the Rock and Roll Hall of Fame and Museum there.

(4) From the Cleveland train station, heading straight to the museum, which houses treasures from the world of rock music. (5) I was amazed by the walls of geometric glass that rose high beside Lake Erie. (6) I later learned that the building covers an awesome 150,000 square feet. (7) The buildings architect, I. M. Pei, has said that he designed the facility to "echo the energy of rock and roll."

(8) I came to the museum knowing a little about the Rock and Roll Hall of Fame. (9) For example, I knew that the music industry had started honoring musicians with Hall of Fame awards in 1986. (10) I also knew that some past inductees were rock legends. (11) These included Chuck Berry, James Brown, Elvis Presley, Aretha Franklin, Bob Dylan, and the Supremes.

(12) A museum guide explained that after their first record is released, it is 25 years later when artists are eligible for the Hall of Fame. (13) I had thought that all Hall of Fame inductees were big stars, but I learned that this isn't true. (14) Honored musicians include some nonperformers, such as songwriters and producers. (15) And a newer award goes to sidemen, artists which have backed

Page 28

GO ON

up famous musicians. (16) One example is guitarist James Burton. (17) Burton, who played guitar for Elvis Presley, was inducted into the Hall of Fame in 2001.

(18) The exhibits in the Hall of Fame were quite impressive! (19) During my visit the museum featured a display about the famous Beatle John Lennon, entitled *Lennon: His Life and Work*. (20) The permenent displays included other historical artifacts, costumes, and stage props. (21) These were some of my favorites: Michael Jackson's sequined glove, song lyrics handwritten by Chuck Berry, and Jim Morrison's Cub Scout uniform. (22) Many exhibits used high-tech lighting, film, and video to bring music history to life.

(23) Visiting this museum was an incredibly memorable experience for me. (24) I had such a good time that I even stopped by the information booth to pick up an application for a summer job at the museum. (25) Last year I worked at our neighborhood swimming pool. (26) I don't know whether my parents will let me move to Cleveland for the summer, but its sure worth a try!

32 What change, if any, should be made in sentence 2?

    F Change *business* to **busness**

    G Insert a comma after *Ohio*

    H Insert **him** after *asked*

    J Make no change

33 What is the most effective way to rewrite the ideas in sentence 4?

    A From the Cleveland train station, I headed straight to the museum, it houses treasures from the world of rock music.

    B I headed straight to the museum, which houses treasures from the world of rock music, from the Cleveland train station.

    C From the Cleveland train station, I headed straight to the museum, which houses treasures from the world of rock music.

    D It was from the Cleveland train station that I headed straight to the museum, which houses treasures from the world of rock music.

GO ON

34 What change, if any, should be made in sentence 7?

    F Change *buildings* to **building's**

    G Change *designed* to **designs**

    H Change *facility* to **fasility**

    J Make no change

35 What is the most effective way to combine sentences 10 and 11?

    A I also knew that some past inductees were rock legends, Chuck Berry, James Brown, Elvis Presley, Aretha Franklin, Bob Dylan, and the Supremes.

    B I also knew that some past inductees were rock legends, these included Chuck Berry, James Brown, Elvis Presley, Aretha Franklin, Bob Dylan, and the Supremes.

    C I also knew that some past inductees were rock legends if these included Chuck Berry, James Brown, Elvis Presley, Aretha Franklin, Bob Dylan, and the Supremes.

    D I also knew that some past inductees were rock legends, including Chuck Berry, James Brown, Elvis Presley, Aretha Franklin, Bob Dylan, and the Supremes.

36 What is the most effective way to rewrite the ideas in sentence 12?

    F A museum guide explained that artists are eligible for the Hall of Fame 25 years after their first record is released.

    G A museum guide explained that after their first record is released, it is 25 years later. When artists are eligible for the Hall of Fame.

    H A museum guide explained that 25 years after their first record is released is when artists are eligible for the Hall of Fame.

    J A museum guide explained that 25 years after their first record is released. Artists are eligible for the Hall of Fame.

37 What change should be made in sentence 15?

    A Change *goes* to **go**

    B Change *artists* to **artist's**

    C Change *which* to **who**

    D Change *have backed up* to **has backed up**

38 Which of these ideas could most logically be added after sentence 19?

    F Fats Domino and the Everly Brothers have also been inducted into the Rock and Roll Hall of Fame.

    G The museum showcases films and videos and produces concerts, lectures, and panel discussions.

    H Ringo Starr was the second drummer for the Beatles.

    J Since I'm a huge Beatles fan, I loved seeing Lennon's guitars and his Sergeant Pepper uniform.

39 What change, if any, should be made in sentence 20?

    A Change *permenent* to **permanent**

    B Change *included* to **including**

    C Delete the comma after *artifacts*

    D Make no change

40 What change, if any, should be made in sentence 26?

    F Change *will let* to **had let**

    G Delete the comma after *summer*

    H Change *its* to **it's**

    J Make no change

41 What is the most effective way to improve the organization of the last paragraph (sentences 23–26)?

    A Delete sentence 24

    B Switch sentences 24 and 25

    C Delete sentence 25

    D Move sentence 24 to the end of the paragraph

GO ON

Bailey was asked to write a paper about a person who has influenced teenagers. Bailey plays tennis, so she wrote about the tennis player Venus Williams. Read Bailey's rough draft and think about the corrections and improvements she should make. When you finish reading, answer the questions that follow.

© S. Carmona/CORBIS

A Tennis Star

(1) She has competed in—and won—some of the most important tennis tournaments in the world. (2) She has triumphed at Wimbledon, the French Open, and the U.S. Open. (3) At six feet two inches tall, this world-renowned athlete dominates the court and continues to achieve victory after victory.

(4) Her name is Venus Williams, and her start in tennis, along with that of her fellow competiter and sister Serena, is the kind of story of which legends are made.

(5) Williams's father introduced her to the game of tennis. (6) When she was 14, her father allowed her to begin playing professionally. (7) Richard

GO ON

Williams enjoyed watching tennis on television, the owner of a security services business. (8) When his daughters were old enough, he began teaching them how to play the game on the public courts of Compton, California. (9) Both girls learned quickly, and by the time Venus was just 10 years old, she was one of the best young tennis players in southern California. (10) A year later her father surprised many people by taking her off the junior tennis circuit and sending her to a tennis academy in Florida.

(11) Because of the untraditional way in which Williams had learned to play the game, some tennis experts wondered whether she would be capable of competing at the professional level. (12) No one wonders anymore. (13) In 1999 Williams was 21. (14) She ranked third in the world in women's tennis. (15) At the 2000 Sydney olympics, she became the first woman in more than 75 years to win gold medals in both singles and doubles tennis. (16) In November of that same year, *Sports Illustrated Women* named Williams Sportswoman of the Year. (17) In the summer that followed, she won their second consecutive Wimbledon championship. (18) But Venus Williams's most celebrated match was yet to come.

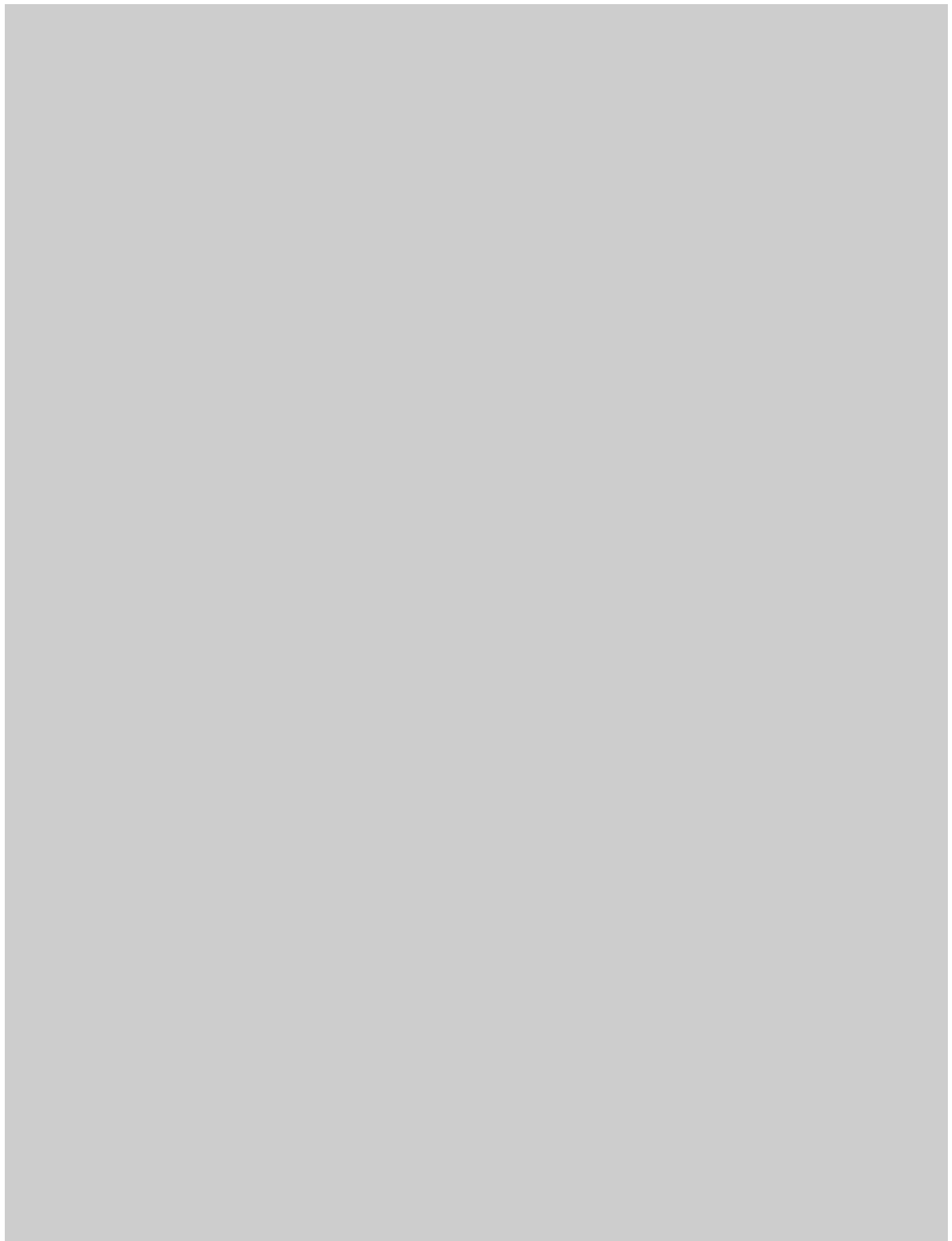(19) In September 2001 the young tennis star played in the final round of the U.S. Open, she defeated one of her toughest opponents, her sister Serena. (20) Public interest were so great that the match became the first women's tennis final ever televised during prime-time hours. (21) There is no doubt among experts in the world of tennis today, that Venus Williams is one of the greatest players ever!

42 What change, if any, should be made in sentence 4?

   F Delete the comma after *tennis*

   G Change *competiter* to **competitor**

   H Change *legends* to **legend's**

   J Make no change

43 What is the most effective way to rewrite the ideas in sentence 7?

   A Richard Williams enjoyed watching tennis on television, who was the owner of a security services business.

   B Richard Williams enjoyed watching tennis on television he was the owner of a security services business.

   C Richard Williams enjoyed watching tennis on television as he was the owner of a security services business.

   D Richard Williams, the owner of a security services business, enjoyed watching tennis on television.

44 What change, if any, should be made in sentence 9?

   F Change *learned* to **learn**

   G Delete the comma after *old*

   H Change *best* to **more better**

   J Make no change

45 What is the most effective way to improve the organization of the second paragraph (sentences 5–10)?

   A Delete sentence 5

   B Switch sentences 5 and 6

   C Move sentence 6 so that it follows sentence 10

   D Delete sentence 10

46 What is the most effective way to combine sentences 13 and 14?

   F In 1999 Williams was 21, she ranked third in the world in women's tennis.

   G In 1999, at the age of 21, Williams ranked third in the world in women's tennis.

   H In 1999 Williams ranked third in the world in women's tennis and at 21.

   J In 1999, ranking third in the world at 21 in women's tennis, it was Williams.

47 What change, if any, should be made in sentence 15?

   A Change *olympics* to **Olympics**

   B Insert a comma after *years*

   C Change *medals* to **metals**

   D Make no change

GO ON

48 What change, if any, should be made in sentence 17?

    F Change *summer* to **Summer**

    G Change *their* to **her**

    H Change *consecutive* to **consicutive**

    J Make no change

50 What change, if any, should be made in sentence 20?

    F Change *interest* to **intrest**

    G Change *were* to **was**

    H Insert a comma after *great*

    J Make no change

49 What is the most effective way to rewrite the ideas in sentence 19?

    A In September 2001 the young tennis star played in the final round of the U.S. Open that defeated one of her toughest opponents, her sister Serena.

    B In September 2001 the young tennis star played in the final round of the U.S. Open. Defeating one of her toughest opponents, her sister Serena.

    C In September 2001 the young tennis star, playing in the final round of the U.S. Open and defeating one of her toughest opponents, her sister Serena.

    D In September 2001 the young tennis star played in the final round of the U.S. Open, defeating one of her toughest opponents, her sister Serena.

51 What change should be made in sentence 21?

    A Insert **hardly** after the first *is*

    B Change *among* to **through**

    C Delete the comma after *today*

    D Change the second *is* to **was**

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS
ON THE ANSWER DOCUMENT.

STOP

MATHEMATICS

Mathematics Chart

LENGTH

Metric	**Customary**
1 kilometer = 1000 meters	1 mile = 1760 yards
1 meter = 100 centimeters	1 mile = 5280 feet
1 centimeter = 10 millimeters	1 yard = 3 feet
	1 foot = 12 inches

CAPACITY AND VOLUME

Metric	**Customary**
1 liter = 1000 milliliters	1 gallon = 4 quarts
	1 gallon = 128 ounces
	1 quart = 2 pints
	1 pint = 2 cups
	1 cup = 8 ounces

MASS AND WEIGHT

Metric	**Customary**
1 kilogram = 1000 grams	1 ton = 2000 pounds
1 gram = 1000 milligrams	1 pound = 16 ounces

TIME

1 year = 365 days

1 year = 12 months

1 year = 52 weeks

1 week = 7 days

1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

Metric and customary rulers can be found on the separate Mathematics Chart.

Mathematics Chart

Perimeter	rectangle	$P = 2l + 2w$ or $P = 2(l + w)$
Circumference	circle	$C = 2\pi r$ or $C = \pi d$
Area	rectangle	$A = lw$ or $A = bh$
	triangle	$A = \frac{1}{2} bh$ or $A = \frac{bh}{2}$
	trapezoid	$A = \frac{1}{2}(b_1 + b_2)h$ or $A = \frac{(b_1 + b_2)h}{2}$
	circle	$A = \pi r^2$
Surface Area	cube	$S = 6s^2$
	cylinder (lateral)	$S = 2\pi rh$
	cylinder (total)	$S = 2\pi rh + 2\pi r^2$ or $S = 2\pi r(h + r)$
	cone (lateral)	$S = \pi rl$
	cone (total)	$S = \pi rl + \pi r^2$ or $S = \pi r(l + r)$
	sphere	$S = 4\pi r^2$
Volume	prism or cylinder	$V = Bh*$
	pyramid or cone	$V = \frac{1}{3}Bh*$
	sphere	$V = \frac{4}{3}\pi r^3$

B represents the area of the Base of a solid figure.

Pi	π	$\pi \approx 3.14$ or $\pi \approx \frac{22}{7}$
Pythagorean Theorem		$a^2 + b^2 = c^2$
Distance Formula		$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
Slope of a Line		$m = \frac{y_2 - y_1}{x_2 - x_1}$
Midpoint Formula		$M = \left(\frac{x_1 + x_2}{2},\ \frac{y_1 + y_2}{2}\right)$
Quadratic Formula		$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Slope-Intercept Form of an Equation		$y = mx + b$
Point-Slope Form of an Equation		$y - y_1 = m(x - x_1)$
Standard Form of an Equation		$Ax + By = C$
Simple Interest Formula		$I = prt$

DIRECTIONS

Read each question. Then fill in the correct answer on your answer document. If a correct answer is <u>not</u> <u>here</u>, mark the letter for "Not here."

SAMPLE A

Find the slope of the line $2y = 8x - 3$.

A $-\dfrac{3}{2}$

B   4

C   8

D   Not here

SAMPLE B

Janice uses a rectangular box to store her art supplies. The dimensions of the rectangular box are 22.5 inches by 14 inches by 11.5 inches. What is the volume of this box in cubic inches?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

1 Simplify the algebraic expression
$5(x + 3)(x + 2) - 3(x^2 + 2x + 1)$.

   A $2x^2 + 7$

   B $2x^2 + 27$

   C $2x^2 + 7x + 7$

   D $2x^2 + 19x + 27$

2 Mr. Harmon is planning to sell his house and wants to paint all the rooms. A can of paint costs $12.95 plus 7.75% sales tax and covers about 476 square feet. What other information is needed to determine the number of cans of paint Mr. Harmon needs to purchase?

   F   The number of rooms in the house

   G   The area in square feet to be painted

   H   The total cost of each can of paint

   J   The name of the store where Mr. Harmon will buy the paint

GO ON

3 Of the 800 students at a local high school, 200 students have no siblings, 318 students have one sibling, 160 students have two siblings, and the rest of the students have three or more siblings. Use the key below to find the circle graph that best represents this information.

Key

No siblings	One sibling	Two siblings	Three or more siblings

A

Siblings

25%
45%
15%
15%

C

Siblings

25%
50%
10%
15%

B

Siblings

25%
40%
20%
15%

D

Siblings

200%
318%
160%
122%

GO ON
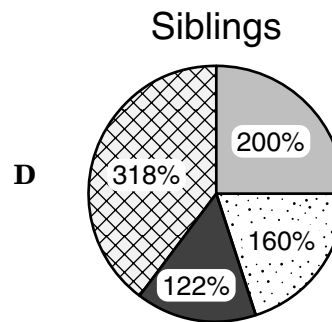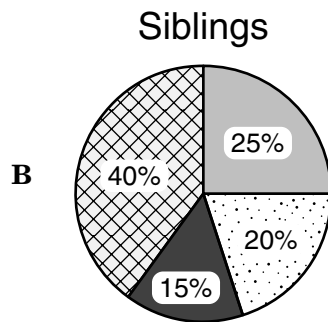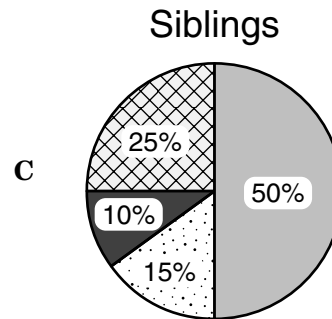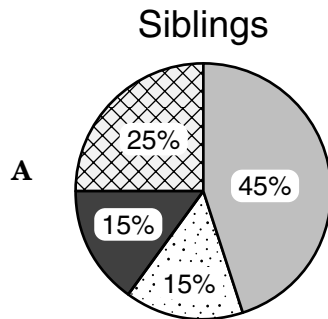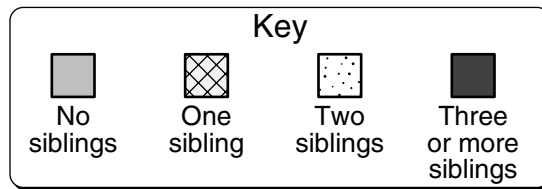
4 Which expression can be used to find the values of $s(n)$ in the table below?

n	1	2	3	4	5	6
$s(n)$	5	8	11	14	?	?

F $3n$

G $5n$

H $n + 4$

J $3n + 2$

5 A rectangle has an area of 144 square inches and a perimeter of 50 inches. What are the dimensions of the rectangle?

A 10 in. by 15 in.

B 9 in. by 16 in.

C 8 in. by 18 in.

D 4 in. by 36 in.

6 Which coordinate points represent the x- and y-intercepts of the graph shown below?
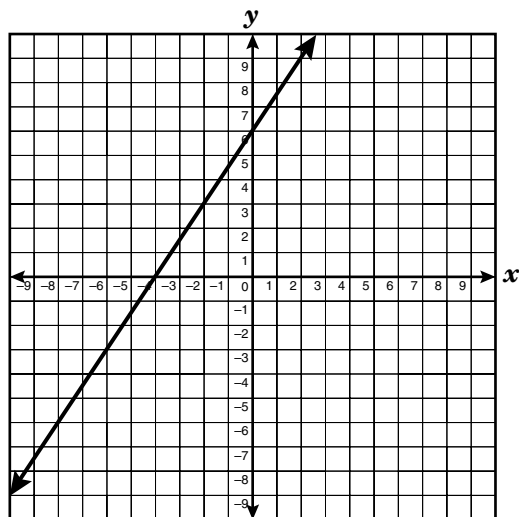
F $(0, -4)$ and $(6, 0)$

G $(-4, 0)$ and $(0, 6)$

H $(6, 0)$ and $(-4, 0)$

J $(0, 6)$ and $(0, -4)$

7 The school drama club plans to attend a Shakespeare festival in 6 weeks. The total cost per person is $185.75. The club has $296 in its account and will divide the money equally among the 8 members who attend the festival. Troy is planning to attend the festival and has already saved $55. How much more money does Troy need in order to cover his cost to attend the festival?

A $93.75

B $110.25

C $148.75

D Not here

8 What will happen to the slope of line *p* if the line is shifted so that the *y*-intercept increases and the *x*-intercept remains the same?
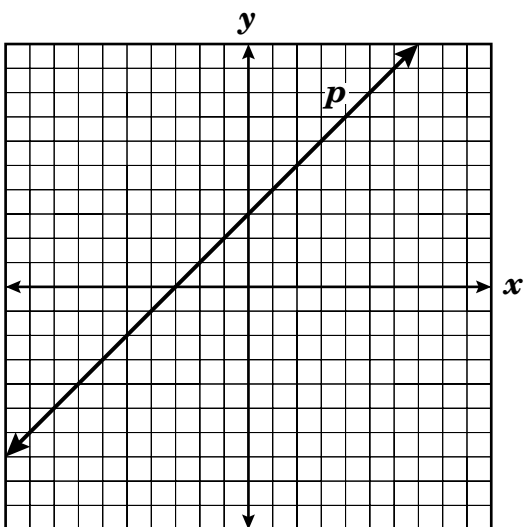
F The slope will change from positive to negative.

G The slope will change from negative to positive.

H The slope will increase.

J The slope will decrease.

9 The blueprint dimensions for a newly constructed house are proportional to the house's actual dimensions. On the blueprints the house's foundation measures 75 centimeters long by 40 centimeters wide. If the house's foundation measures 15 meters long, what is the foundation's actual width?

A 8 m

B 28.1 m

C 50 m

D 200 m

10 At what coordinates should vertex *Z* be placed to create a quadrilateral *WXYZ* that is similar to quadrilateral *PQRS*?
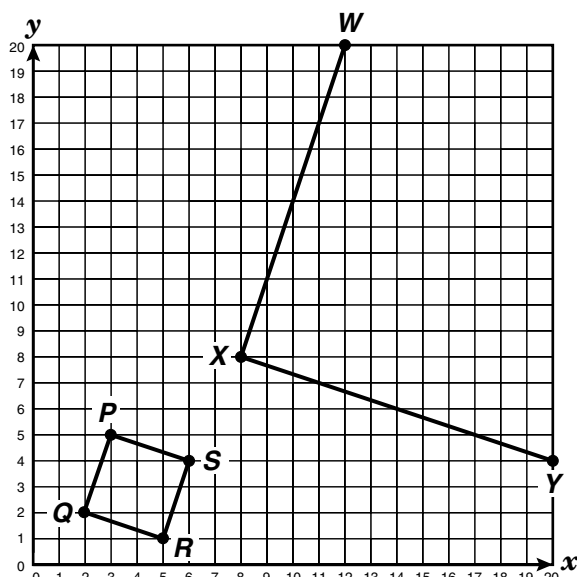
F (24, 16)

G (24, 24)

H (20, 20)

J (16, 24)

11 Linda owns a set of seven wrenches. The wrenches come in consecutive increments of $\frac{1}{8}$ inch. Linda has misplaced a wrench. The sizes she has are $\frac{1}{8}$ inch, $\frac{1}{4}$ inch, $\frac{1}{2}$ inch, $\frac{5}{8}$ inch, $\frac{3}{4}$ inch, and $\frac{7}{8}$ inch. Which size wrench is missing from Linda's set?

A $\frac{3}{16}$ in.

B $\frac{3}{8}$ in.

C $\frac{11}{16}$ in.

D   Not here

---

12 The coaches of a group of debate teams answered a survey about hours of debate team practice and number of team wins. The graph shows the results of this survey.
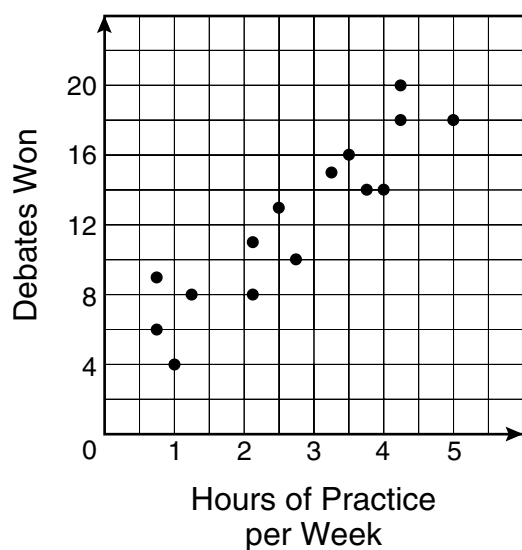
Based on these results, if a team practices 4 hours per week next season, which is the best estimate of the number of debates the team can expect to win?

F   1

G   12

H   16

J   20

13 The owners of Neatly Packaged Company make a cylindrical container that has the dimensions shown below.
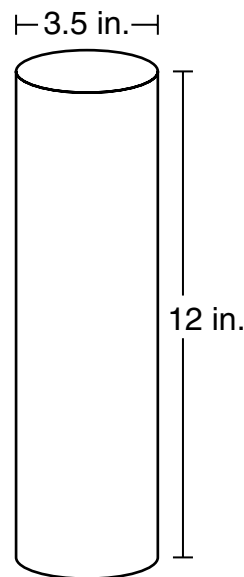
What is the approximate lateral surface area available for the package label?

A   131.95 in.^{2}

B   151.19 in.^{2}

C   263.89 in.^{2}

D   115.45 in.^{2}

14 Rita put some hummingbird feeders in her backyard. The table shows the number of hummingbirds that Rita saw compared to the number of feeders.

Bird-Watching

Number of Feeders	Number of Hummingbirds
1	3
2	5
3	7
4	9
5	11

Which equation best describes the relationship between h, the number of hummingbirds, and f, the number of feeders?

F $h = 2f + 1$

G $f = 2h + 1$

H $h = f + 2$

J $f = \dfrac{h + 1}{2} + 1$

15 Mrs. Cheung hired a landscaping service to plant a row of bushes around her triangular backyard.

12 ft

30 ft
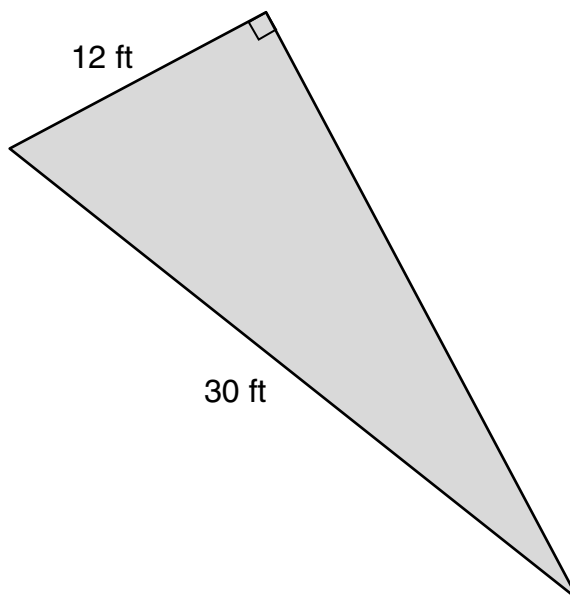
If the bushes must be planted 3 feet apart, approximately how many bushes are needed for Mrs. Cheung's backyard?

A 23

B 25

C 28

D 32

16 A copy machine can enlarge or reduce letters proportionately. Which would not be an enlargement or reduction of the letter below?
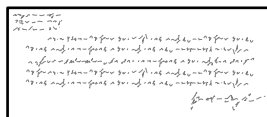
1.5 cm

3.5 cm

F 0.6 cm

1.4 cm
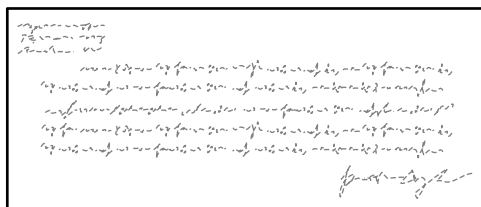
G 2.7 cm

6.3 cm
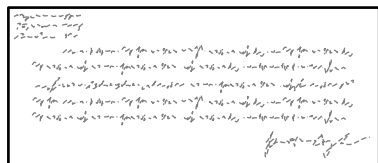
H 2.1 cm

4.9 cm
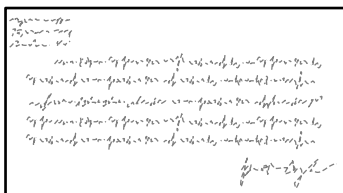
J 2.5 cm

4.5 cm

17 What is the effect on the graph of the equation $y = -4x^2$ when the equation is changed to $y = 4x^2$?

A The graph of $y = 4x^2$ is translated 8 units down.

B The graph of $y = 4x^2$ is a reflection of $y = -4x^2$ across the x-axis.

C The graph of $y = 4x^2$ is translated 8 units up.

D The graph of $y = 4x^2$ is a reflection of $y = -4x^2$ across the y-axis.

18 A shaded parallelogram is graphed on the coordinate grid below.
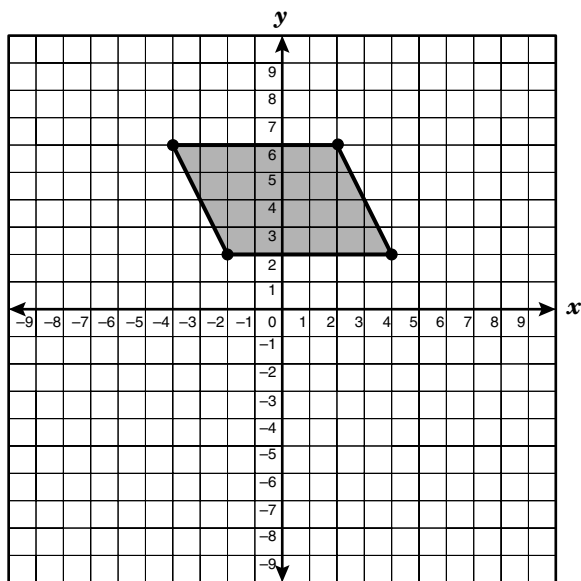
Which of the following functions describes a line that would include an edge of the shaded parallelogram?

F $y = -2x + 5$

G $y = -2x - 2$

H $y = -2x + 9$

J $y = -2x - 1$

19 A circle and its diameter are shown below.
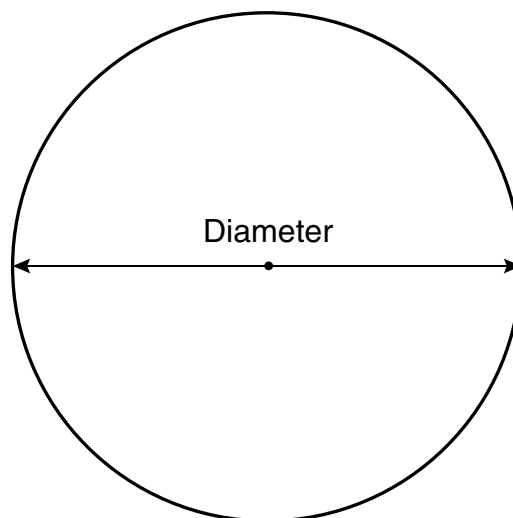
The value of π is the result of which of the following ratios comparing a circle's circumference to its diameter?

A $\dfrac{C}{r}$

B $\dfrac{d}{C}$

C $\dfrac{r^2}{C}$

D $\dfrac{C}{d}$

20 Which inequality best describes the graph shown below?
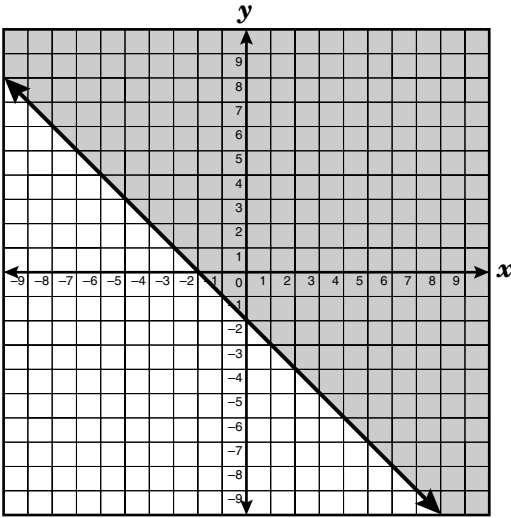
F $y \geq -2x$

G $y \geq -x - 2$

H $y \geq -2x - 2$

J $y \geq x - 2$

21 If the dimensions of a rectangle with a perimeter of 24 inches are tripled, what will be the perimeter in inches of the new rectangle?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

22 Which statement about the triangles below is true?
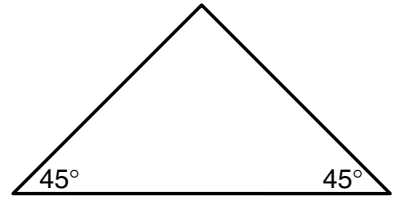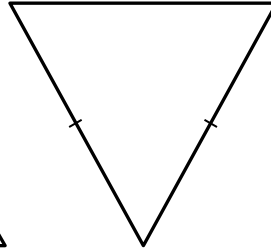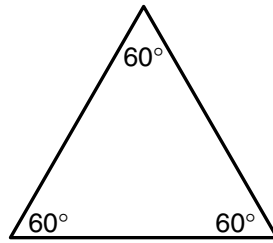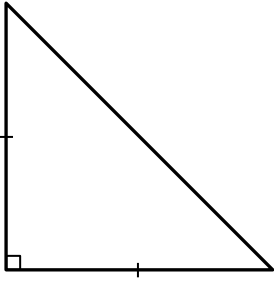
   F   All the triangles are scalene.

   G   All the triangles are equiangular.

   H   All the triangles are equilateral.

   J   All the triangles are isosceles.

---

23 The volume of a rectangular prism is given by the function $V = lwh$. Which statement is true?

   A   The volume of the prism depends on the product of only the length and the width.

   B   The volume of the prism depends on the product of only the length and the height.

   C   The volume of the prism depends on the product of the length, the width, and the height.

   D   The volume of the prism depends on the product of only the width and the height.

24 What is the x-coordinate of the solution to the system of linear equations below?

$$4x + 5y = 8$$
$$2x - 3y = -18$$

   F -4

   G -3

   H 3

   J 4

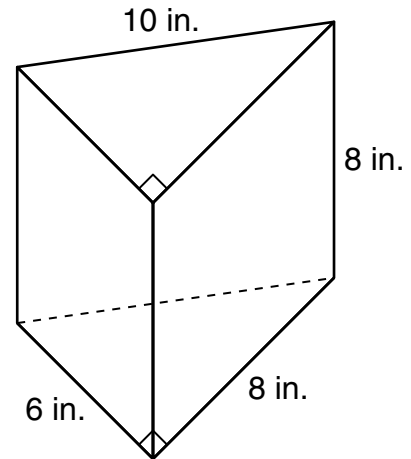**25** Which expression is equivalent to $5(x^2 - 4x) - (x + 1)$?

A $5x^2 - 21x + 1$

B $5x^2 - 5x - 1$

C $5x^2 - 21x - 1$

D $5x^2 - 5x + 1$

26 What is the rate of change of the graph below?
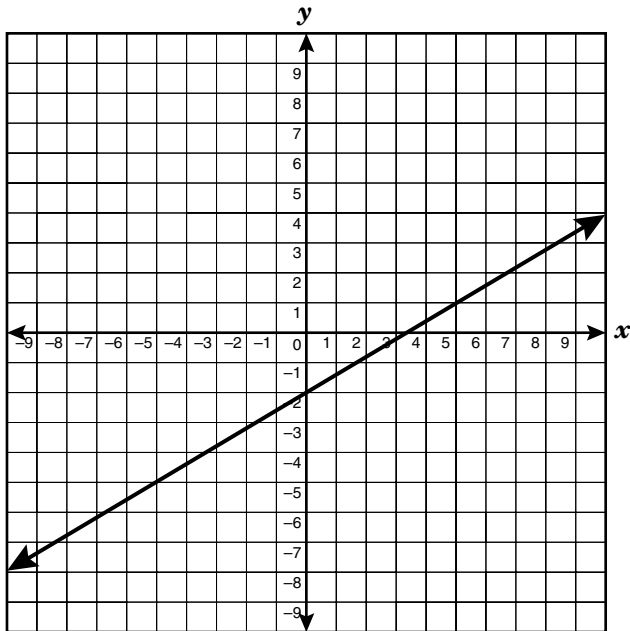
F 3.5

G 1.67
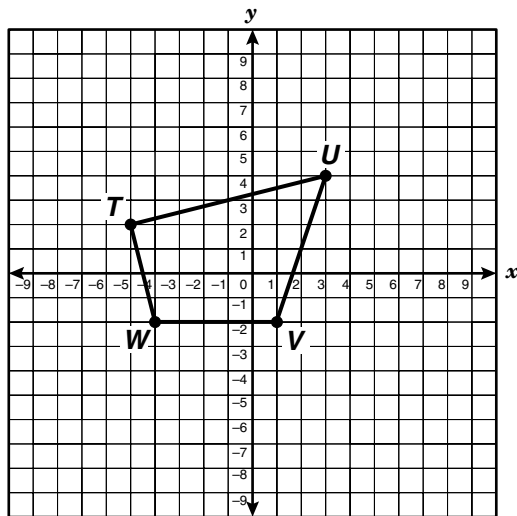
H 0.6

J -1.67

27 A triangular prism is shown below.

What is the volume of this triangular prism?

A 192 in.^{3}

B 240 in.^{3}

C 384 in.^{3}

D 480 in.^{3}

28 If quadrilateral *TUVW* is reflected across the *x*-axis to become quadrilateral *T'U'V'W'*, what will be the coordinates of *W'*?

F $(-4, -2)$

G $(-4, 2)$

H $(2, -4)$

J $(4, -2)$

29 Of the 32 students in Mrs. Zane's class, 25% have brown hair. Of the remaining students, 12.5% have red hair. How many students in Mrs. Zane's class have red hair?

A 3

B 4

C 21

D Not here

30 Steven has a cylindrical fish tank with a diameter of 8 inches and a height of 14 inches. He placed some rocks that took up 50 cubic inches at the bottom of the tank. Then he filled the tank with springwater to 2 inches from the top. Which is the best strategy for determining the volume of water the fish has for swimming?

14 inches

8 inches
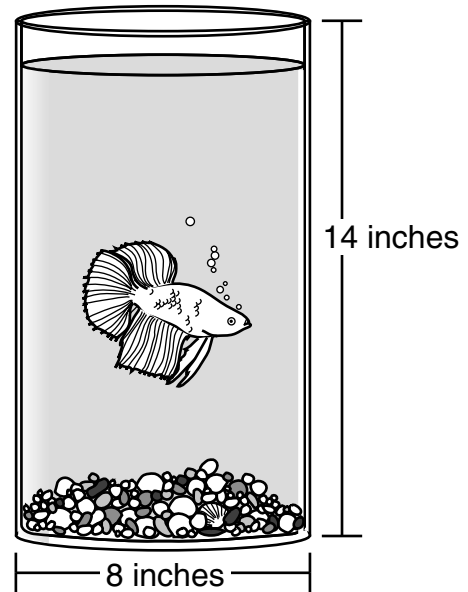
F $\pi(8)^2(14) - 50$

G $\pi(8)^2(14 - 2) - 50$

H $\pi(4)^2(14 - 2) - 50$

J $\pi(14 - 2)^2(4) - 50$

31 In the system of equations $4x + 2y = 10$ and $3x + 7y = -18$, which expression can be correctly substituted for *y* in the equation $3x + 7y = -18$?

A $10 - 2x$

B $10 + 2x$

C $5 - 2x$

D $5 + 2x$

32 Mrs. Franklin received a 7% raise at her job. If she was earning x dollars per year before, how much is she earning now?

   F $x + 7$

   G $x + 0.07$

   H $x + 0.7x$

   J $x + 0.07x$

33 Which expression is equivalent to $\dfrac{27x^{-2}y^6}{3x^5y^2z^0}$?

   A $\dfrac{9x^7y^4}{z}$

   B $\dfrac{y^4}{9x^3}$

   C $\dfrac{9y^4}{x^7}$

   D $\dfrac{9y^4}{x^7z}$

34 Nicholas earned the following grades on his science exams: 83, 88, 87, and 83. If Nicholas scores a 90 on his last exam, which measure of central tendency will give him the highest score?

   F   Mode

   G   Median

   H   Range

   J   Mean

35 Troy borrowed money from his father so that he could buy a used car. The table shows the remaining balance, b, of Troy's loan after each payment.
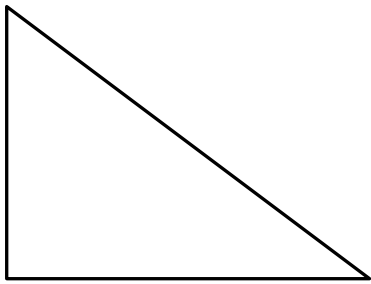
Troy's Loan Balance

Number of Payments, p	Loan Balance, b
1	$3910
2	$3685
3	$3460
4	$3235
5	$3010
6	$2785

Which function can be used to describe this relationship?
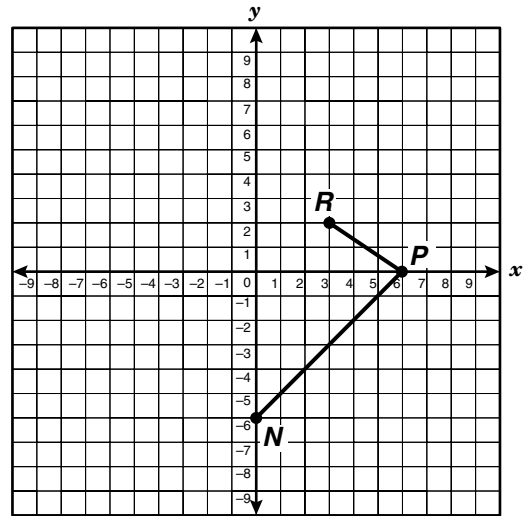
   A $b = 3910 + 225p$

   B $b = 4135 - 225p$

   C $b = 2785 + 225p$

   D $b = 3685 - 225p$

GO ON

36 Look at the right triangle shown below. Which of the following could be the triangle's dimensions?

- **F** 12, 16.8, 18.2
- **G** 5.4, 10.6, 16
- **H** 1.2, 1.6, 2
- **J** 8, 10, 12.5

37 A portion of isosceles trapezoid *NPRT* is shown on the grid below.

At what coordinates should vertex *T* be placed to make $\overline{NP}$ parallel to $\overline{RT}$ in order to complete isosceles trapezoid *NPRT*?

- **A** $(-2, -2)$
- **B** $(-3, -2)$
- **C** $(-2, -3)$
- **D** $(-4, -5)$

38 The net of a cylinder is shown below. Use the ruler on the Mathematics Chart to measure the dimensions of the cylinder to the nearest tenth of a centimeter.
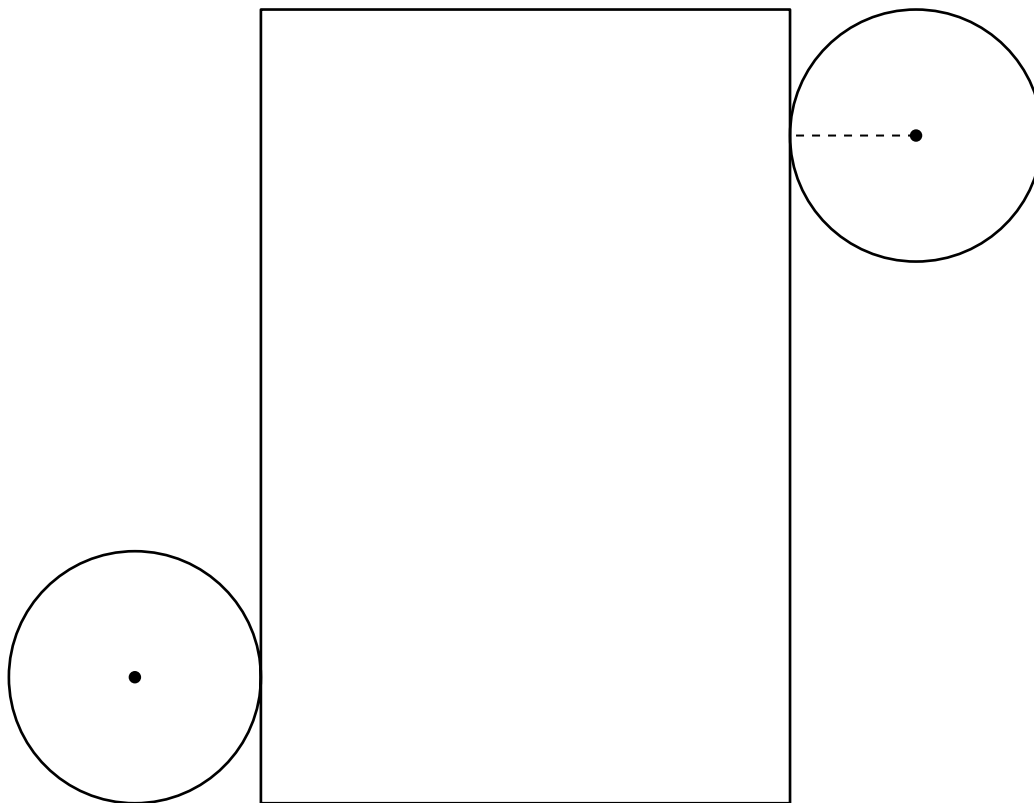
Which of the following best represents the total surface area of this cylinder?

F 142 cm^2

**G** 93 cm^2

H 23 cm^2

J 14 cm^2

39 The table below shows the population and the area in square miles of some U.S. states.

State	Population	Area (square miles)
Alaska	626,932	591,004
California	33,871,648	155,973
Florida	15,982,378	58,560
Montana	902,105	147,137
New Jersey	8,414,350	7,836
Texas	20,851,830	267,338

Which statement best describes the relationship between the population and the area of a state?

A The larger a state's area, the larger its population is.

B No relationship can be determined from the data in the table.

C New Jersey has the smallest population of the states in the table because it has the smallest area.

D Texas is the largest U.S. state.

**40** What are the roots of the function graphed below?
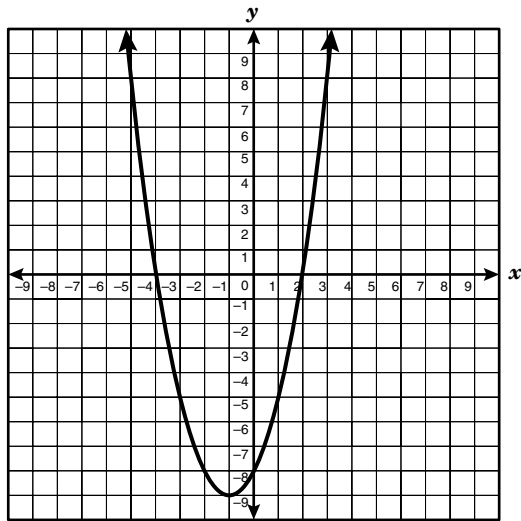
F $(-1, -9)$ and $(0, -8)$

G $(0, -4)$ and $(2, 0)$

H $(-4, 0)$ and $(2, 0)$

J $(0, 2)$ and $(0, -4)$

41 Near the downtown area of a city, there is a vacant triangular plot of land with sides that measure 22 feet, 27 feet, and 17 feet. If the city council decides to plant an oak tree in the corner with the smallest angle, where should the tree be planted?

A In the corner opposite the side that is 17 feet

B In the corner opposite the side that is 22 feet

C In the corner opposite the side that is 27 feet

D In the center of the triangular plot

42 To estimate the height of her school's gym, Nicole sights the top of the gym wall in a mirror that she has placed on the ground. The mirror is 3.6 meters from the base of the gym wall.
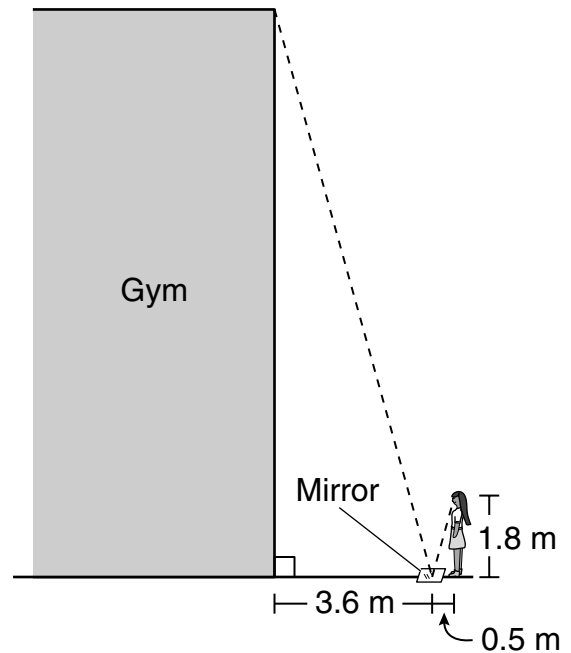
Nicole is standing 0.5 meter from the mirror, and her height is about 1.8 meters. What is the height of the gym wall?

F 1 m

G 5.9 m

H 7.2 m

J 12.96 m

GO ON

43 The table below shows the results of a number cube being rolled.

Outcome	Frequency
1	6
2	2
3	2
4	3
5	2
6	0

Based on these results, what is the experimental probability of rolling a 1?

A   2.5%

B $\dfrac{1}{6}$

C $\dfrac{2}{5}$

D   0.6

44 Which equation describes the line that passes through the point $(4, 7)$ and is parallel to the line represented by the equation $-3x + y = 4$?

F $y = -3x + 19$

G $y = 3x - 5$

H $y = \dfrac{1}{3}x + 5\dfrac{2}{3}$

J $y = -\dfrac{1}{3}x + 8\dfrac{1}{3}$

45 How does the graph of $y = x^2$ differ from the graph of $y = x^2 - 4$?

A   The graph of $y = x^2 - 4$ is wider than the graph of $y = x^2$.

B   The graph of $y = x^2 - 4$ is shifted to the left of the graph of $y = x^2$.

C   The graph of $y = x^2 - 4$ is shifted down from the graph of $y = x^2$.

D   The graph of $y = x^2 - 4$ is narrower than the graph of $y = x^2$.

GO ON

46 In 1998 the enrollment at a community college was approximately 2500 students. In 2002 the enrollment had increased to 3250 students. If the enrollment continues to increase at this rate, what is a reasonable projection of enrollment for 2010?

F 4750

G 5750

H 6250

J 9000

47 A pattern exists as a result of raising i, an imaginary number, to n, an integer greater than or equal to 1.
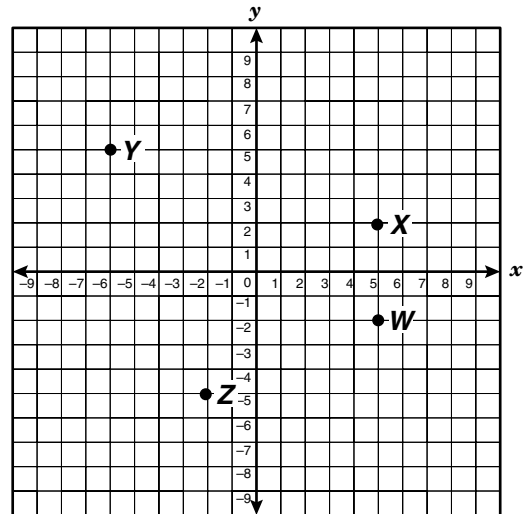
Powers of i

i^n $(n \geq 1)$	Solution
i^1	$\sqrt{-1}$
i^2	-1
i^3	$-i$
i^4	1
i^5	$\sqrt{-1}$
i^6	-1

Based on the table, which of the following best represents i raised to the 16th power?

A $\sqrt{-1}$

B -1

C $-i$

D 1

48 Which point on the grid satisfies the conditions $x \geq 5$ and $y < -1$?

**F** W

G X

H Y

J Z

49 A candy company sells chocolate-covered cherries in a box. The empty box weighs 4.2 ounces. Each piece of candy weighs at least 1.8 ounces. Which inequality best describes the total weight in ounces, w, of a box of chocolate-covered cherries in terms of c, the number of candies in the box?

A $w \geq 1.8c + 4.2$

B $w \geq 1.8c - 4.2$

C $w \geq 4.2c + 1.8$

D $w \geq 4.2c - 1.8$

50 Mr. Harrison wants to calculate the cost of buying a carpet to cover his rectangular living room floor. He knows the cost per square foot of carpet, and he knows the length, width, and height of the living room. Which geometric formula should Mr. Harrison use to determine the cost of the carpet he needs?

F $c^2 = a^2 + b^2$

G $V = Bh$

H $A = lw$

J $P = 2l + 2w$

51 The graph below best represents which of the following relationships between temperature and time?
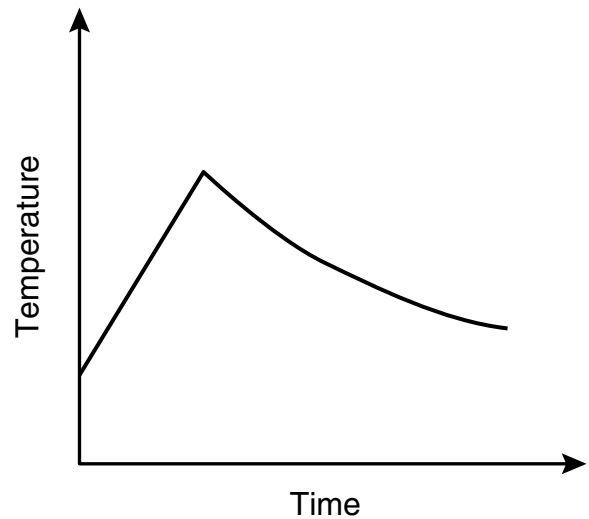
A Oven temperature while a cake is baking

B Temperature of water that is heated on a stove, removed, and then allowed to cool

C Temperature of a container of hot tea after placing several cubes of ice in it

D Room temperature of a gym after the air conditioner is turned on

GO ON

52 Which graph best represents the function $y = -1.75x + 5$?

F

G

H

J
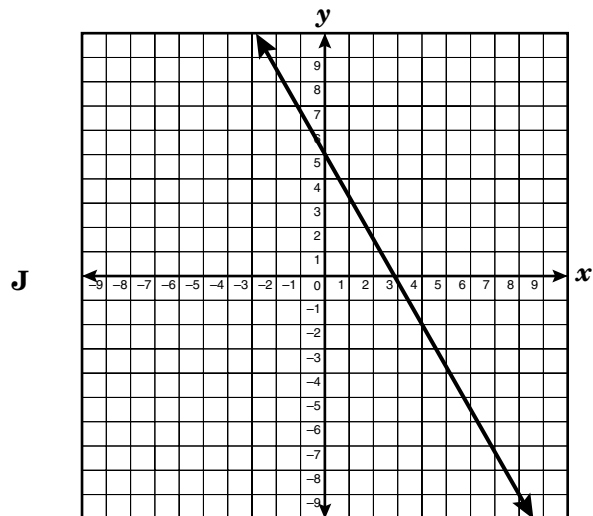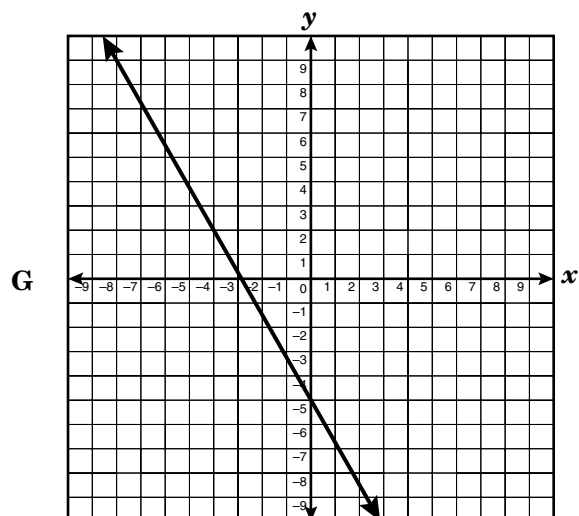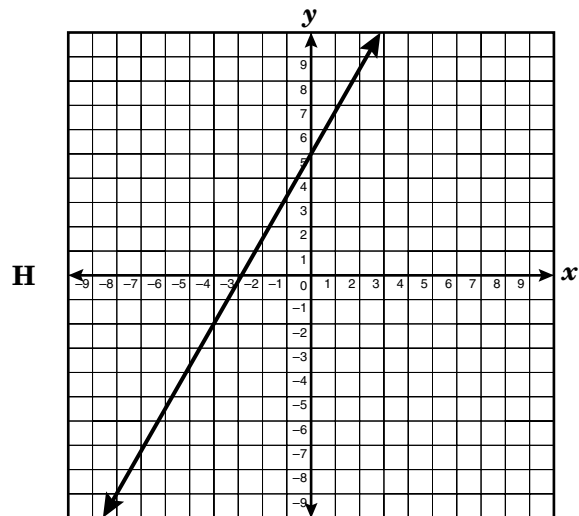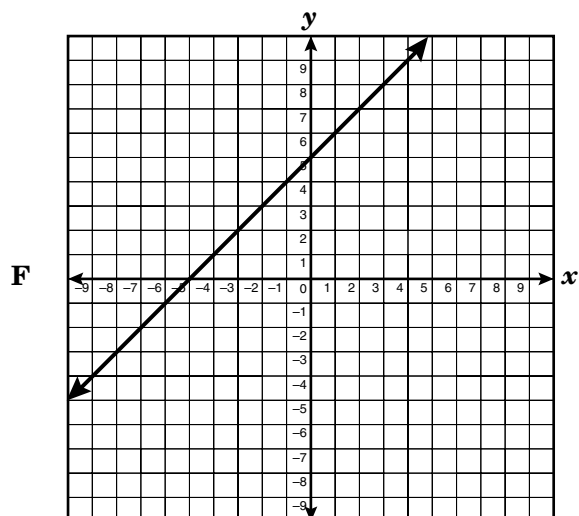
53 Shannon has spent $850 on gasoline and repairs for her car in the last 6 months. Of this total, she spent $300 on repairs. The gasoline she purchased cost $1.29 per gallon. Which of the following can be used to determine how many gallons of gas, g, Shannon has bought within the last 6 months?

    A $1.29g - 300 = 850$

    B $1.29g + 300 = 850$

    C $1.29 - 300g = 850$

    D $1.29 + 300g = 850$

54 Chase and Sara went to the candy store. Chase bought 5 pieces of fudge and 3 pieces of bubble gum for a total of $5.70. Sara bought 2 pieces of fudge and 10 pieces of bubble gum for a total of $3.60. Which system of equations could be used to determine the cost of 1 piece of fudge, f, and 1 piece of bubble gum, g?

    F $5f + 3g = 3.60$
         $2f + 10g = 5.70$

    G $5f + 2g = 5.70$
         $3f + 10g = 3.60$

    H $f + g = 22$
         $7f + 13g = 9.30$

    J $5f + 3g = 5.70$
         $2f + 10g = 3.60$

GO ON

55 The graph below shows h, the height in meters of a model rocket, versus t, the time in seconds after the rocket is launched. From the graph, what conclusion can be made about the flight of the rocket?
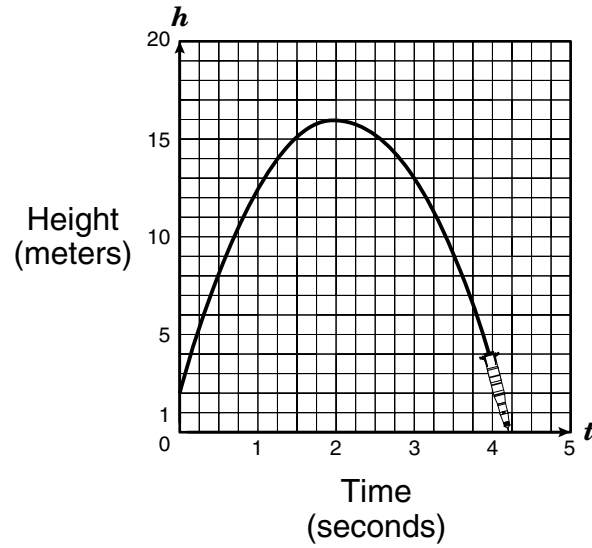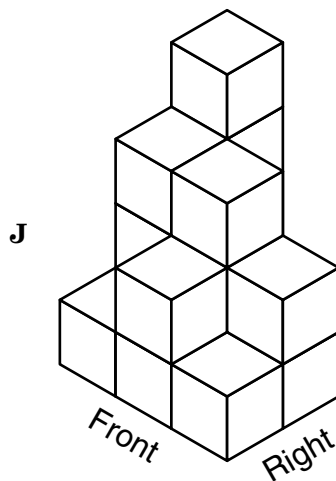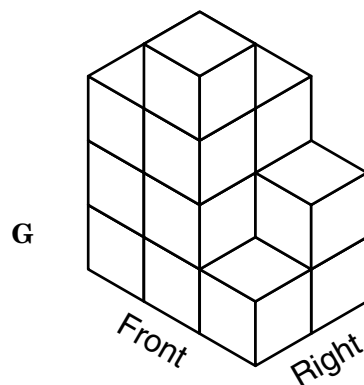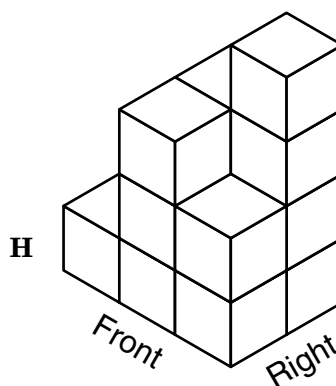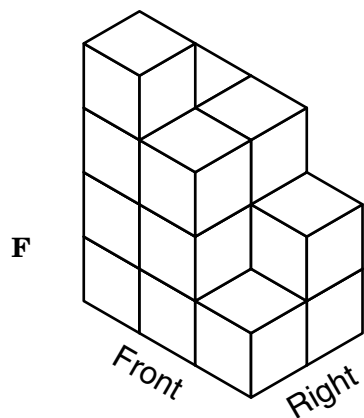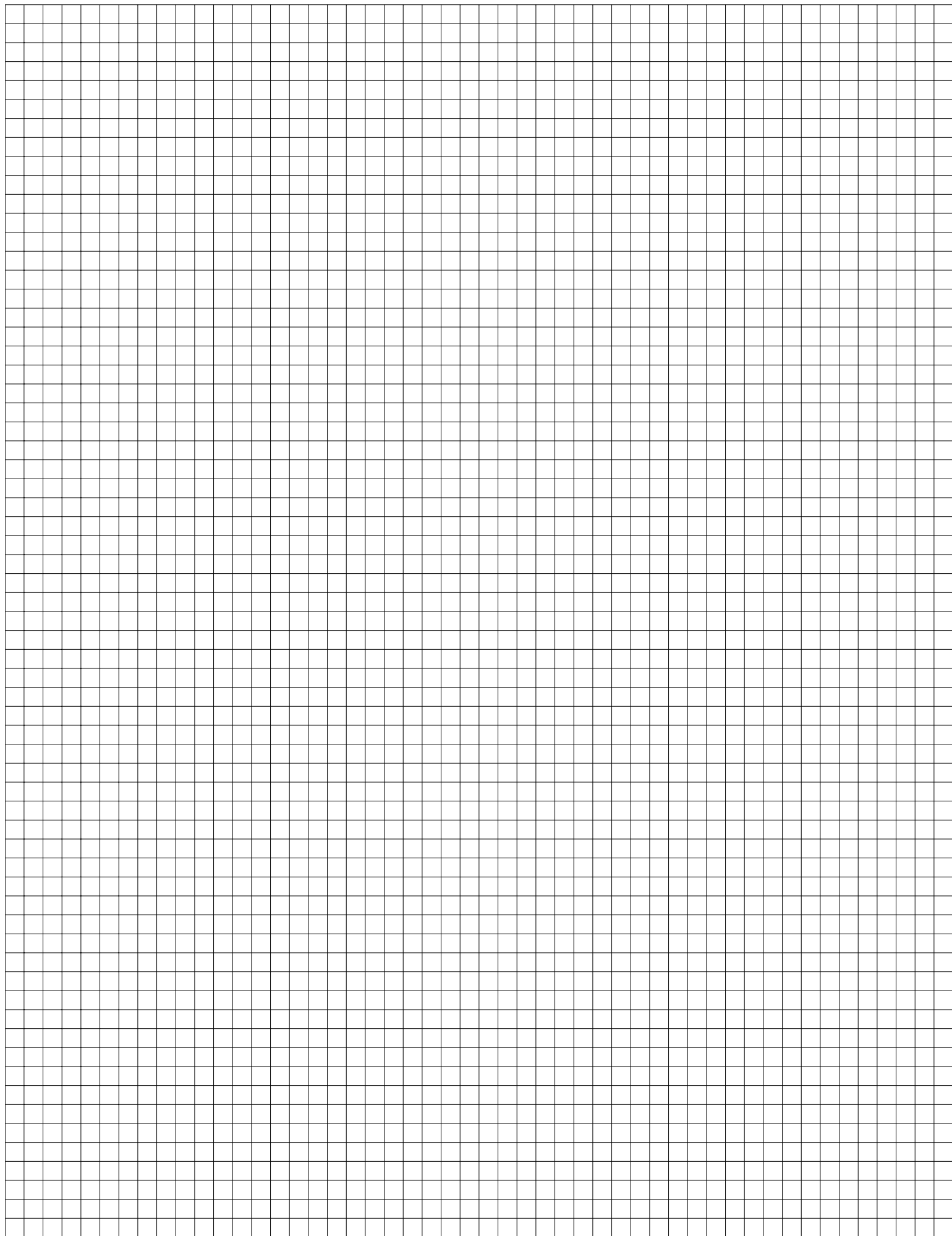

A The rocket reached its maximum height after 2.5 seconds.

B At 0 seconds the rocket was 2 meters off the ground.

C The height of the rocket was 0 meters when it was launched.

D The rocket was in flight for 5 seconds.

56 The drawing shows the top view of a structure built with cubes as well as the number of cubes in each column of the structure.

	3	4
1	3	2

Right

Front

Which 3-dimensional view represents the same structure?

F

Front   Right

H

Front   Right

G

Front   Right

J

Front   Right

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS
ON THE ANSWER DOCUMENT.

STOP

SOCIAL STUDIES

SAMPLE A

Who served as president of the United States during the Civil War?

A   Thomas Jefferson

B   Andrew Jackson

C   James K. Polk

D   Abraham Lincoln

STOP

Use the map and your knowledge of social studies to answer the following question.

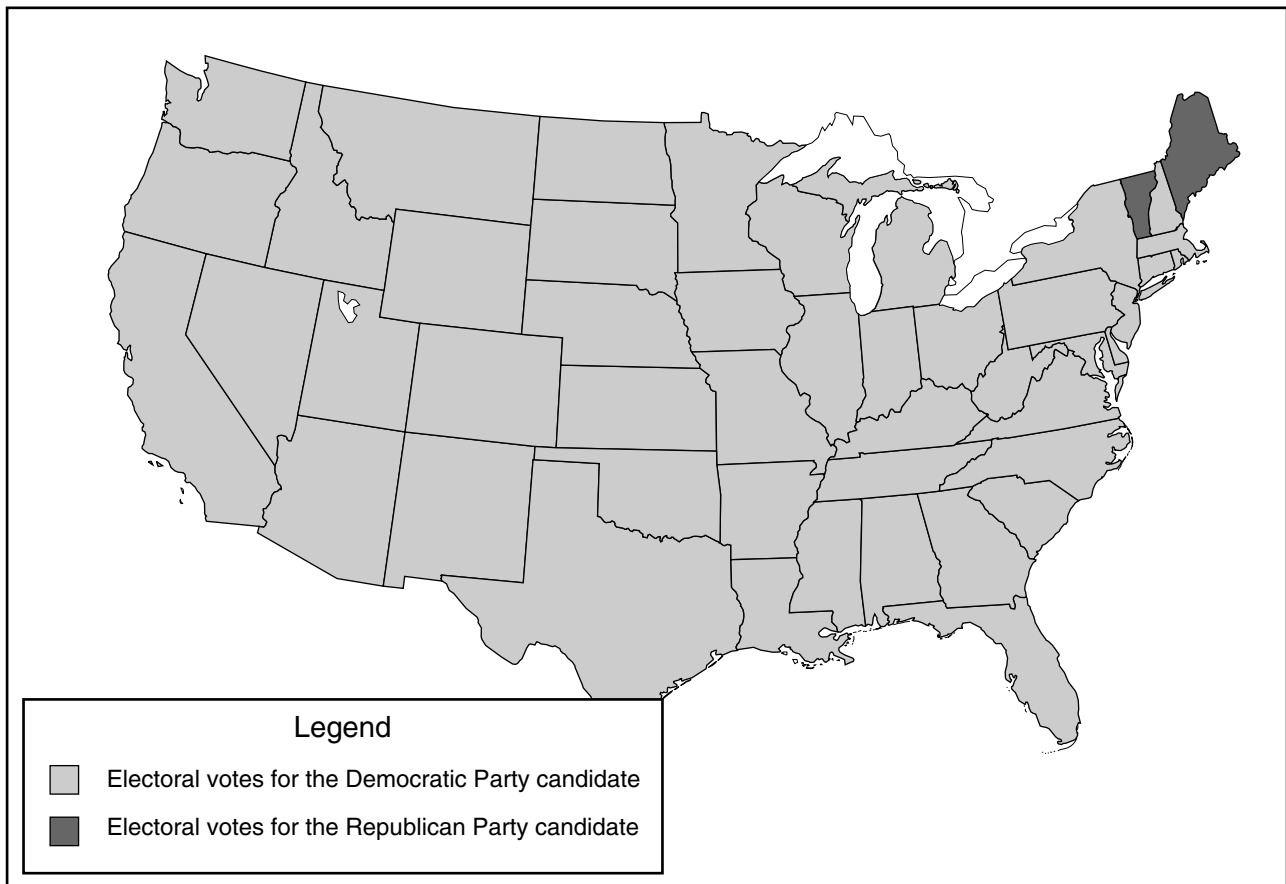## Electoral Vote Results of the 1936 Presidential Election

Legend
Electoral votes for the Democratic Party candidate
Electoral votes for the Republican Party candidate

Source: U.S. Census Bureau

1 The distribution of electoral votes from the 1936 presidential election illustrated in the map above indicates that the —

A Republican Party presidential candidate nearly won the popular vote

B Democratic Party dominated presidential politics at that time

C Republican Party presidential candidate won most of the southern states

D Democratic Party was unpopular in the Midwest

GO ON

2 Thomas Jefferson's main contribution to the American Revolution was —

    F writing the Declaration of Independence

    G securing French support for the American independence movement

    H leading American troops to victory at the Battle of Saratoga

    J representing Virginia at the Constitutional Convention

Use the graph and your social studies skills to answer the following question.

Religions of South Asian Countries
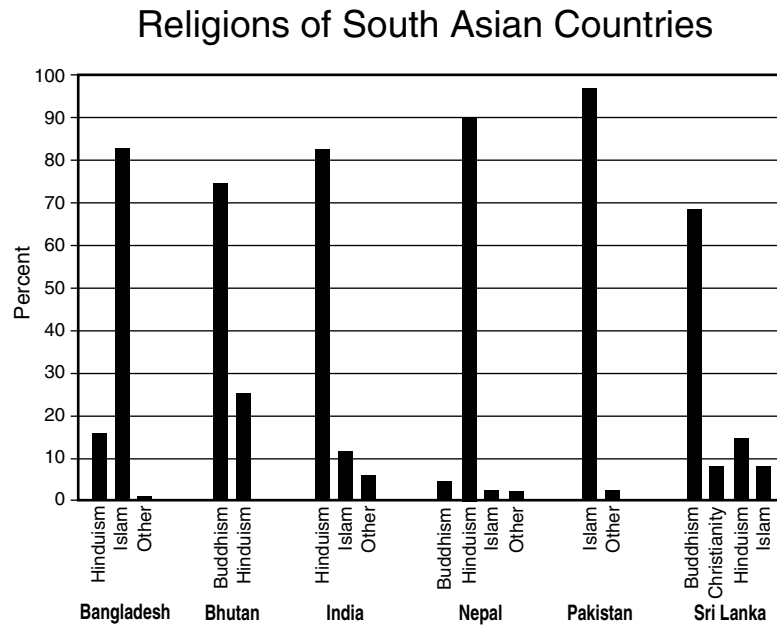
Source: *World Almanac*, 2001

3 Based on the graph, which two countries appear to be most influenced by Islam?

    A Bangladesh and India

    B India and Nepal

    C Bangladesh and Pakistan

    D Bhutan and Sri Lanka

Use the photograph and your knowledge of social studies to answer the following question.
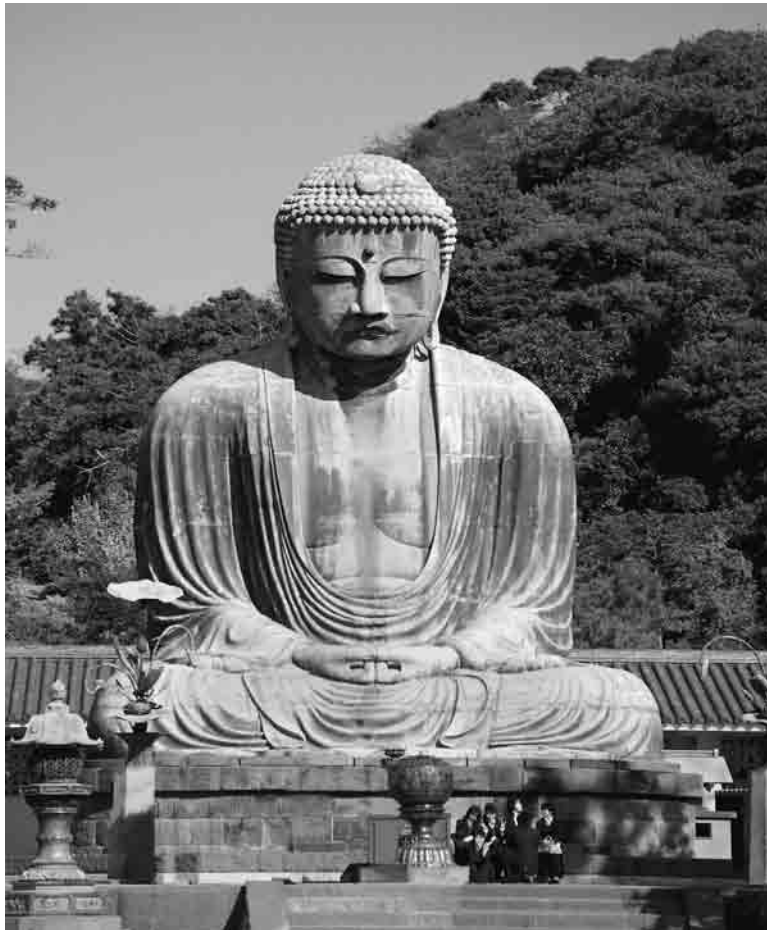
Source: CORBIS

4   The statue of Buddha in the photograph above is located in Japan. It demonstrates the —

   F   development of a theocracy in Japan

   G   influence of Buddhism on Japanese commerce

   H   Japanese rejection of major Western religions

   J   cultural influence of Buddhism in Japan

GO ON

Use the information in the box and your knowledge of social studies to answer the following question.

- Steam power

- Available labor supply

- Abundance of raw materials

---

5 Which of the following would be the best title for this list?

   A   Factors Leading to the French Revolution

   B   Increased Agricultural Output

   C   Factors Leading to the Industrial Revolution

   D   Decreased Urban Population

Use the map and your knowledge of social studies to answer the following question.

Warsaw Pact Nations, 1955
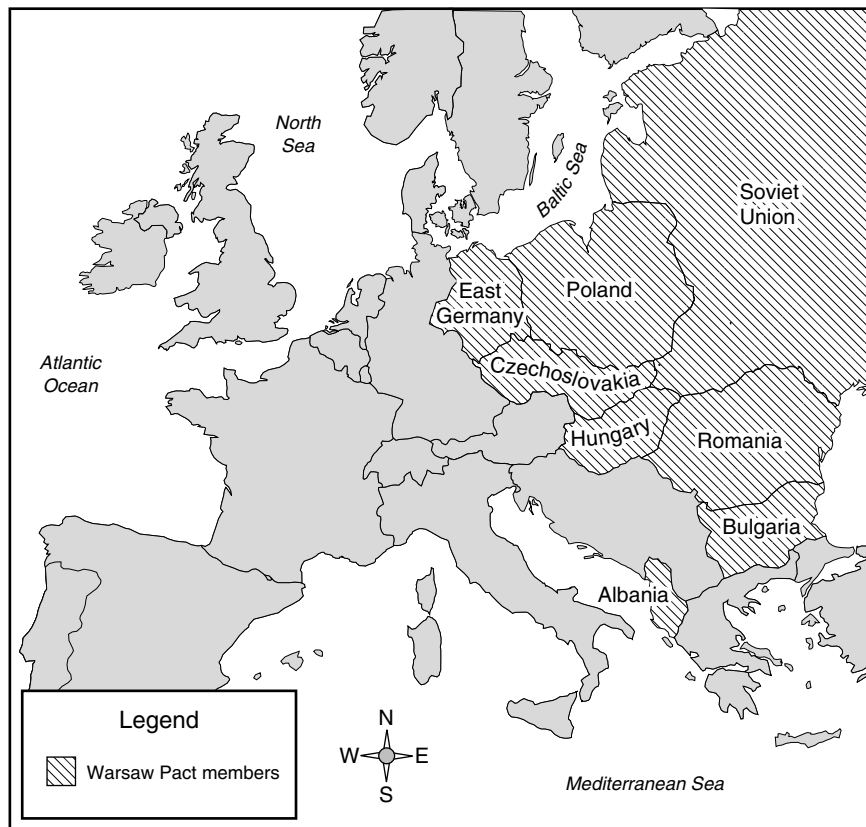
6 Based on the map, what conclusion can be drawn about all the countries that formed the Warsaw Pact in 1955?

  F They were bordered by a mountain range.

  G They were located north of the Baltic Sea.

  H They had direct access to large bodies of water.

  J They were located in Eastern Europe.

Use the cartoon and your knowledge of social studies to answer the following question.

Drag Race

Source: *Digital Chicago*

7 What point of view is expressed in this cartoon?

    A World food production is exceeding the nutritional demands of the world's population.

    B World food production is struggling to meet the needs of the world's growing population.

    C World population estimates are based on the assumption that each family has two children.

    D World leaders have no control over the pace of world food production.

8 Which physical feature of the eastern United States was the greatest barrier to the westward migration of early American settlers?

    F   Continental Divide

    G   Ohio River

    H   Appalachian Mountains

    J   Coastal lowlands

Use the diagram and your knowledge of social studies to answer the following question.

The U.S. Constitution

Legislative Branch		Executive Branch		Judicial Branch	
Senate	House of Representatives	President		Supreme Court	
		Executive Agencies	Cabinet	Courts of Appeal	District Courts

Makes laws	Executes and enforces laws	Interprets laws
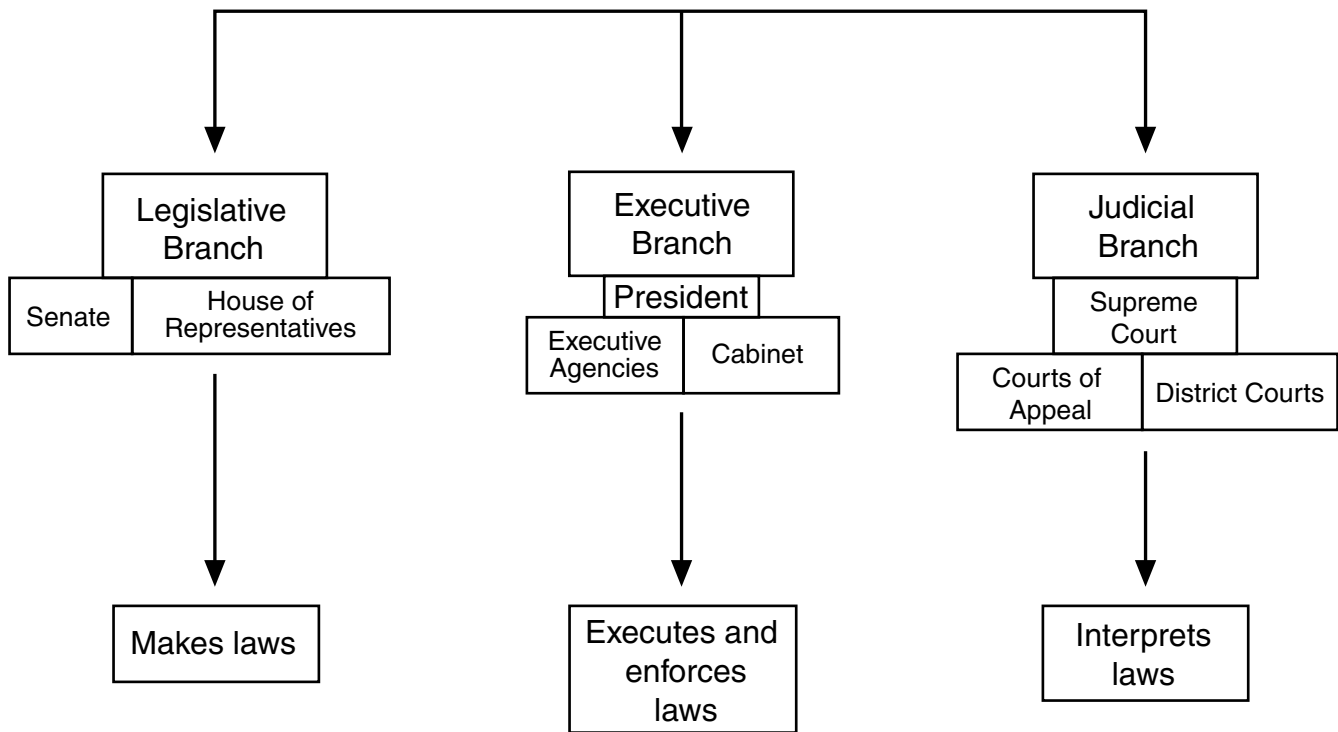
9 The diagram above best represents which constitutional principle?

   A Republicanism

   B Popular sovereignty

   C Separation of powers

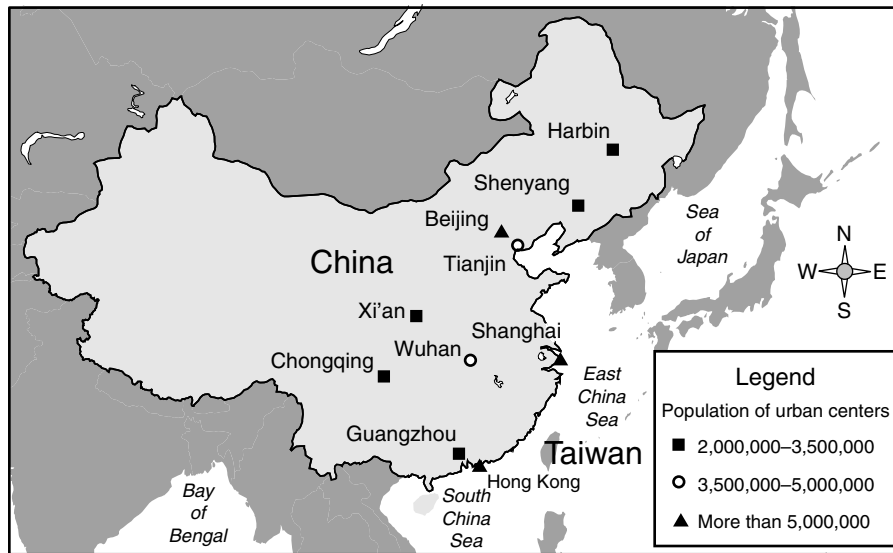   **D** Individual rights

Use the map and your knowledge of social studies to answer the following question.

China's Largest Urban Centers

10 According to the map above, all Chinese urban centers with a population greater than five million people are —

    F   located on or near the eastern coast

    G   concentrated in the interior of the country

    H   geographically isolated from other cities

    J   located along the northern border

Use the excerpt and your knowledge of social studies to answer the following question.

> The African is conditioned . . . to a freedom of which Europe has little conception. . . . He realizes that he must fight unceasingly for his own complete emancipation; for without this he is doomed. . . .
>
> *— Jomo Kenyatta, 1938*

11 This excerpt reveals Kenyatta's bias in favor of —

A African tribal warfare

B European imperialism

C European civilization

D African independence

Use the table and your social studies skills to answer the following question.

U.S. Foreign Trade—Top 10 Countries, 2001

Country	Total Imports and Exports (billions of U.S. dollars)
Canada	380.69
Mexico	232.94
Japan	184.24
China	121.52
Germany	89.27
United Kingdom	82.19
Korea	57.38
Taiwan	51.54
France	50.19
Italy	33.74

Source: U.S. Census Bureau

**12** Which of the following statements is supported by the table?

   F North American countries have the smallest portion of U.S. foreign trade.

   G U.S. foreign trade with Canada exceeds U.S. trade with any other country.

   H European countries have the largest portion of U.S. foreign trade.

   J U.S. foreign trade with China has steadily declined.

13 Which of the following types of government allows individuals elected by popular vote to exercise power?

   A Theocratic government

   B Totalitarian government

   C Monarchical government

   D Representative government

Use the maps and your social studies skills to answer the following question.

Ethnic Divisions in Bosnia

Map 1: Pre–Civil War, 1991   Map 2: 1995
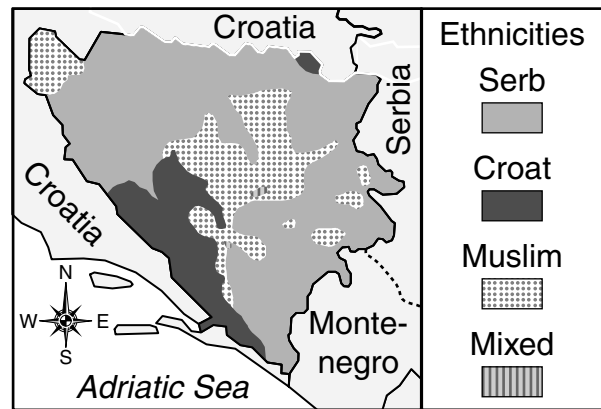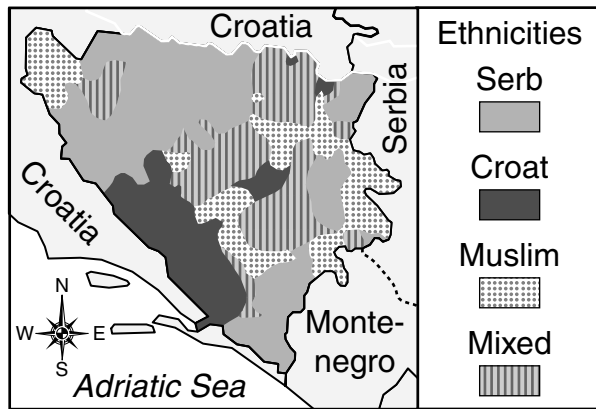
14 According to the information on the maps, what effect did the Bosnian Civil War have on ethnic grouping in the region by 1995?

    F Ethnic groups were distributed evenly throughout Bosnia.

    G There was a large decline in the size of ethnically mixed areas.

    H Muslims became the dominant ethnic group in Bosnia.

    J Croats migrated to Croatia to help fortify the Serbian-Croatian border.

Use the information in the box and your knowledge of social studies to answer the following question.

> • Low infant-mortality rate
>
> • High literacy rate
>
> • High per capita income

15 The factors listed above describe typical standard-of-living conditions in countries that —

A   are highly industrialized

B   receive large amounts of foreign aid

C   are in the process of implementing free-market reforms

D   practice subsistence-level agriculture

16 In which region do oil exports serve as the primary economic activity?

F   Middle East

G   Central America

H   Central Europe

J   East Africa

GO ON

Use the map and your knowledge of social studies to answer the following question.

Number and Location of Registered Palestinian Refugees, 1998
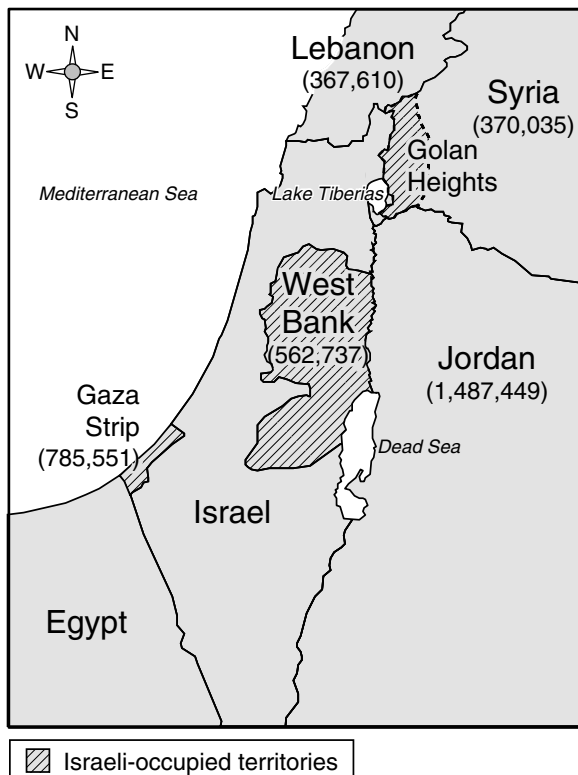
Source: United Nations Relief and Works Agency (UNRWA)

17 According to the information on the map, the largest number of registered Palestinian refugees live —

   A   along the Mediterranean coast

   B   in the West Bank

   C   on the Egyptian border

   D   in Jordan

18 The 13th Amendment to the U.S. Constitution was adopted in 1865. This amendment brought the United States closer to its goal of safeguarding the unalienable rights of life, liberty, and the pursuit of happiness by —

   F   pardoning Confederate soldiers

   G   giving women the right to vote

   H   outlawing the institution of slavery

   J   eliminating immigration quotas

GO ON

Use the headlines and your social studies skills to answer the following question.

The Northern Times
Tuesday, September 10, 1850
CALIFORNIA ADMITTED AS A FREE STATE

The Southern Register
Tuesday, September 10, 1850
STRICT FUGITIVE SLAVE LAW PASSED

The Carolina Express News
Tuesday, September 10, 1850
SLAVERY STILL LEGAL IN DISTRICT OF COLUMBIA

The Boston Weekly Times
Tuesday, September 10, 1850
COMPROMISE SAVES THE UNION!

19 All of the newspaper headlines above show reactions to the Compromise of 1850 and reflect —

A differing frames of reference on a controversial event

B diplomatic failure on a national level

C a southerner's biased perspective toward western states

D the inevitability of civil war

Use the excerpt and your knowledge of social studies to answer the following question.

> That the pretended power of suspending the laws or the execution of laws by regal authority without the consent of Parliament is illegal . . .
>
> —*English Bill of Rights, 1689*

20 Ideas similar to those expressed in the excerpt above are also found in the —

F Virginia Statute of Religious Freedom

G U.S. Constitution

H Mayflower Compact

J Proclamation of 1763

21 The invention of the airplane in the 20th century reduced —

A geographic barriers to travel

B military offensive capability

C the need for standing armies

D the popularity of automobiles

GO ON

Use the table and your knowledge of social studies to answer the following question.

General Characteristics of Two Government Systems

Democracy	Dictatorship
Multiparty system	Single-party system
?	Censorship
Civilian control of police	Police controlled by the dictator

22 Which of the following best completes the table above?

F Freedom of movement

G Military tribunals

H Cult of personality

J Freedom of the press

23 Which newspaper headline would most likely have appeared in Philadelphia in 1776?

A

> ### The Philadelphia Gazette
> #### 1776
> ───────────
> CONGRESS RATIFIES
> CONSTITUTION

B

> ### The Philadelphia Gazette
> #### 1776
> ───────────
> FRENCH FINALLY DEFEATED IN
> SEVEN YEARS' WAR

C

> ### The Philadelphia Gazette
> #### 1776
> ───────────
> DECLARATION OF
> INDEPENDENCE
> APPROVED BY CONGRESS

D

> ### The Philadelphia Gazette
> #### 1776
> ───────────
> WASHINGTON ELECTED
> PRESIDENT

24 How were legislators chosen to serve in colonial assemblies in North America?

F They were elected by eligible citizens.

G They were selected by church officials.

H They were appointed by royal governors.

J They were chosen by the king.

Use the information in the box and your knowledge of social studies to answer the following question.

- Delegate to the First and Second Continental Congresses
- Diplomat during the Revolutionary War
- Participated in negotiating the Treaty of Paris, 1783
- Served as second president of the United States

25 Which of the following Founding Fathers is described above?

A Alexander Hamilton

B John Adams

C George Washington

D Thomas Paine

GO ON

26 In 1965 Congress passed the Voting Rights Act, which outlawed literacy tests as a requirement for voting. In effect, this law helped enforce the 15th Amendment (1870), which —

F prohibited slavery in the United States

G eliminated voting restrictions based on race

H outlawed the use of exit polls in federal elections

J gave women the right to vote in all elections

Use the information in the box and your knowledge of social studies to answer the following question.

- Importation of slaves outlawed by Congress

- Nullification Crisis

- Kansas-Nebraska Act passed

- Confederate States of America formed

28 Which of the following is the best title for the list above?

F Causes of the Mexican War

G Events Related to the Issue of States' Rights

H Milestones in the History of U.S. Immigration

J Examples of Federal Abuses of Power

27 Which of the following individuals was appointed commander of the Continental army by the Second Continental Congress in 1775?

A Thomas Jefferson

B John Adams

C George Washington

D Nathan Hale

29 One of the purposes of the Declaration of Independence was to —

A end slavery and the slave trade

B reduce economic competition between small and large colonies

C encourage people in England to revolt against the British king

D justify the American colonists' revolution to the rest of the world

GO ON

Use the excerpt and your knowledge of social studies to answer the following question.

Excerpt from *Federalist* No. 78

> According to the plan of the [Constitutional] Convention, all judges who may be appointed by the United States are to hold their offices DURING GOOD BEHAVIOR; which is conformable to the most approved of the state constitutions. . . .

30 The main idea of this excerpt is addressed in the U.S. Constitution's provision for the —

F lifetime appointment of federal judges who obey the law

G executive procedure for vetoing legislation without judicial approval

H confirmation process for federal judges

J judicial process for reviewing legislation

**Use the excerpt and your social studies skills to answer the following question.**

> [T]he period of debate is closed. Arms, as the last resource, decide the contest. . . . Every thing that is right or natural pleads for separation.
> — *Thomas Paine,* Common Sense*, 1776*

31 The contest Thomas Paine refers to in the excerpt above is the —

A argument concerning the limits of state power

B British struggle to control transatlantic trade

C argument concerning the legality of slavery

D struggle for the independence of the American colonies

GO ON

Use the graphs and your knowledge of social studies to answer the following question.

Sales and Price Figures for the Ford Model T
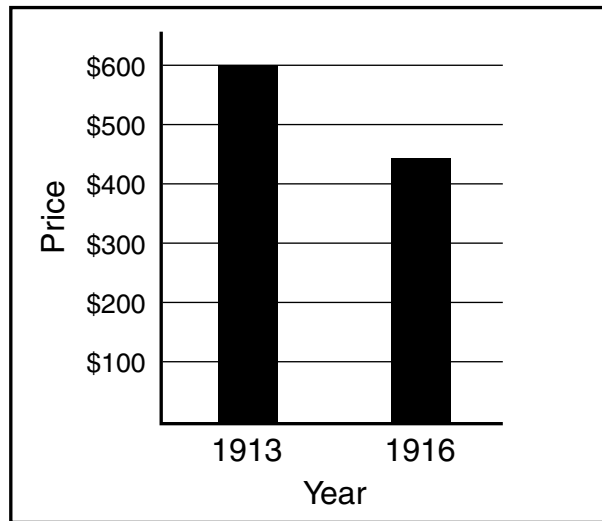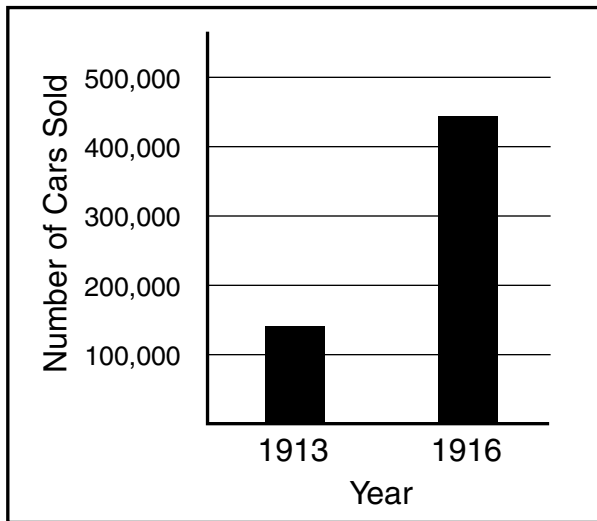
32 The changes reflected in the bar graphs above were a direct result of —

    F   the introduction of assembly-line production

    G   increases in the federal minimum wage

    H   government subsidies to the steel industry

    J   increases in labor union membership

GO ON

Use the map and your knowledge of social studies to answer the following question.

Manchu Expansion by 1750
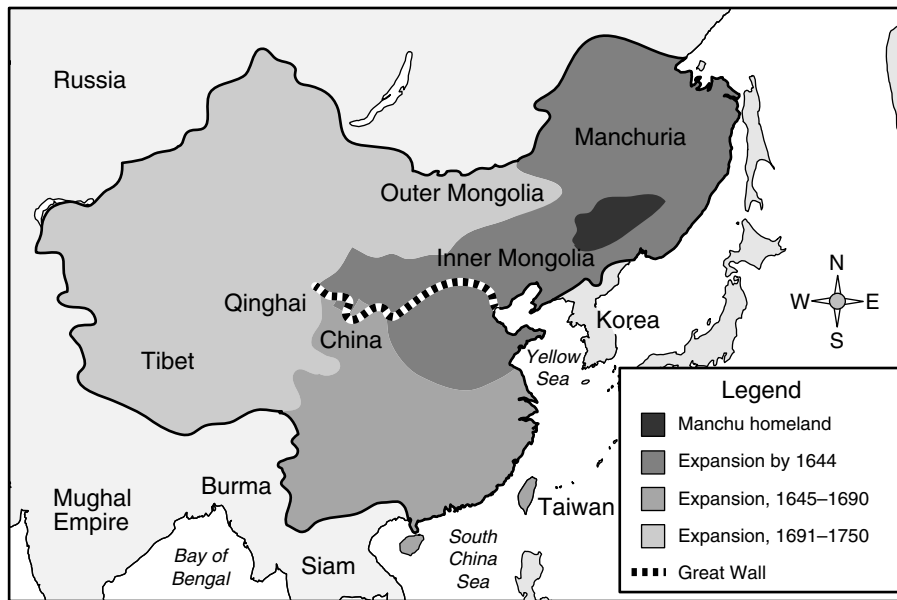
33 According to the map, which of the following was one of the last regions to become part of the Manchu Empire?

    A   Inner Mongolia

    B   Taiwan

    C   Mughal Empire

    D   Qinghai

Excerpt from the Emancipation Proclamation

I do order and declare all persons held as slaves within said designated states . . . are, and henceforward shall be, free; and that the executive government of the United States, including the military and naval authorities thereof, will recognize and maintain the freedom of said persons.

34 In which year was the statement above issued?

F 1787

G 1812

H 1863

J 1877

35 During the 20th century, desert areas in North Africa spread southward, forcing many people in the region to migrate. The primary cause of this phenomenon was —

A industrialization and poor urban planning

B excessive use of pesticides

C overgrazing and many years of drought

D inefficient irrigation systems

Adult Literacy Rate (age 15 and older)
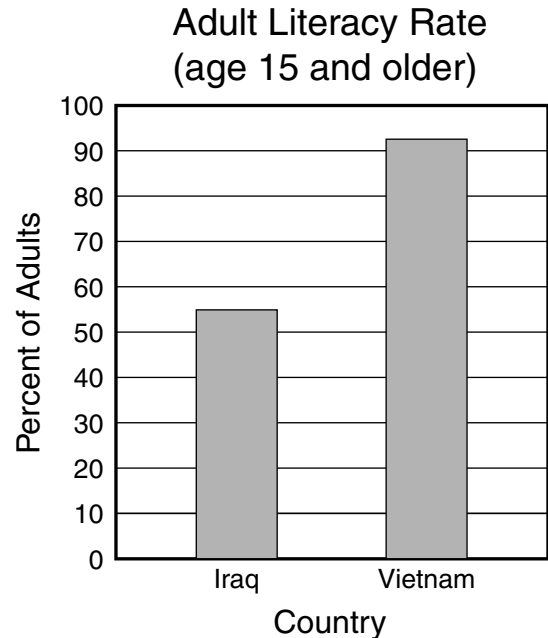
Source: Development Data Group, World Bank, 2000

36 From the information in the graph above, it can be concluded that —

F Iraq has a smaller population than Vietnam

G there are more public schools in Iraq than in Vietnam

H Iraq is less industrialized than Vietnam

J education has been more successful in Vietnam than in Iraq

GO ON

37 Which of the following defines an unalienable right?

    A A right that provides access to a political process

    B A right that allows personal freedom without accountability

    C A right that guarantees economic security

    D A right that cannot be taken away by the government without due process of law

38 What was the primary effect of the construction of the Aswan High Dam along the Nile River in the 1960s?

    F It created a boundary between Israel and Egypt.

    G It created a large recreation area.

    H It provided flood control and electricity to the region.

    J It led to the discovery of many ancient Egyptian treasures.

Use the excerpt and your social studies skills to answer the following question.

> It is really mortifying, sir, when a woman possessed of a common share of understanding considers the difference of education between the male and female sex. . . . [W]hy should your sex wish for such a disparity [difference] in those whom they one day intend for companions and associates?
>
> — *Abigail Adams, Letter to John Thaxton, February 15, 1778*

39 The author of this excerpt is expressing —

    A opposition to equal employment opportunities for women

    B support for equal government representation for women

    C opposition to equal rights for married women

    D support for equal schooling for women

GO ON

Use the map and your knowledge of social studies to answer the following question.

Effect of the Black Death, 14th Century
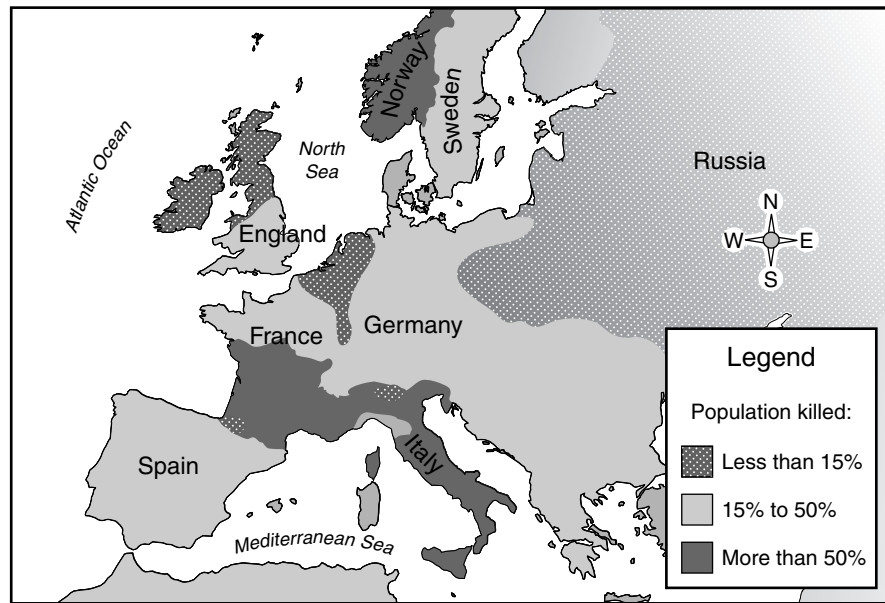
40 According to the information on the map, the Black Death —

    F killed more than 50 percent of Russia's population

    G was most severe in Italy, France, and Norway

    H killed less than 15 percent of Europe's population

    J did not spread to Norway and Sweden

Use the poster and your social studies skills to answer the following question.

Source: © Smithsonian American Art Museum

41 The purpose of this World War II propaganda poster was to —

   A promote disunity among Germans living in the United States

   B encourage U.S. citizens to boycott German imports

   C portray Nazi officers as worthy adversaries

   D build support for the overseas fight against Nazis

Use the information in the box and your knowledge of social studies to answer the following question.

- Guarantee of a speedy trial

- Freedom from illegal searches and seizures

- Protection from self-incrimination during trial

- Freedom of speech and religious worship

42 All of the principles listed in the box are included in which of the following historical documents?

   F *The Federalist Papers*

   G Articles of Confederation

   H Declaration of Independence

   J Bill of Rights

GO ON

Use the cartoon and your social studies skills to answer the following question.

Source: CORBIS

43 It can be concluded from the political cartoon above that —

    A Confederate states were making debt repayment a priority

    B Union businesses owed a large sum of money to the Confederacy

    C Confederate states were refusing to repay their debt to the U.S. government

    D Confederate money was worth more than Union currency

44 The Declaration of Independence proclaimed the American colonists' intention to —

    F attack British Loyalists

    G form a new nation

    H seize British merchant ships

    J end the slave trade

Use the table and your knowledge of social studies to answer the following question.

Telecommunications Projects in Selected Countries

| Country	Private Investment in Infrastructure Projects (millions of dollars)	
	1990–1994	1995–1999
Bangladesh	116.0	472.4
India	93.0	9,176.7
Pakistan	581.5	107.5
Sri Lanka	43.6	905.0

Source: World Bank

45 Which conclusion can be drawn from the information in the table?

    A   Pakistan has nationalized its entire telecommunications industry.

    B   India has substantially improved its telecommunications capability.

    C   Bangladesh uses the most-advanced telecommunications equipment.

    D   Sri Lanka employs more telecommunications workers than the other countries.

46 In addition to granting citizenship to former slaves, the 14th Amendment to the U.S. Constitution —
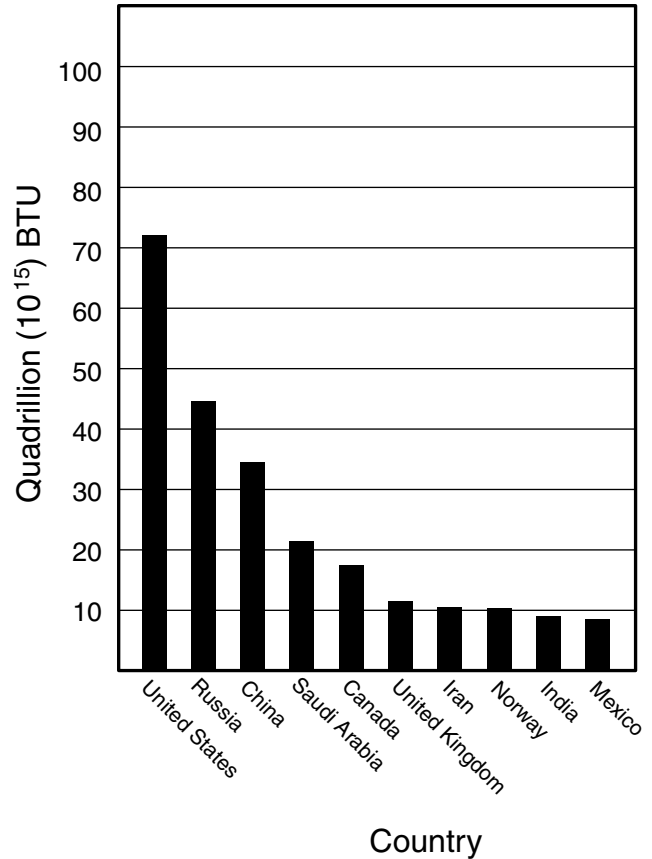
    F   guaranteed equal protection under the laws

    G   granted voting rights to women

    H   abolished literacy tests for voting

    J   protected freedom of speech

GO ON

Use the graphs and your knowledge of social studies to answer the following question.

Top 10 Consumers of Energy, 2000

Quadrillion (10^{15}) BTU

Country
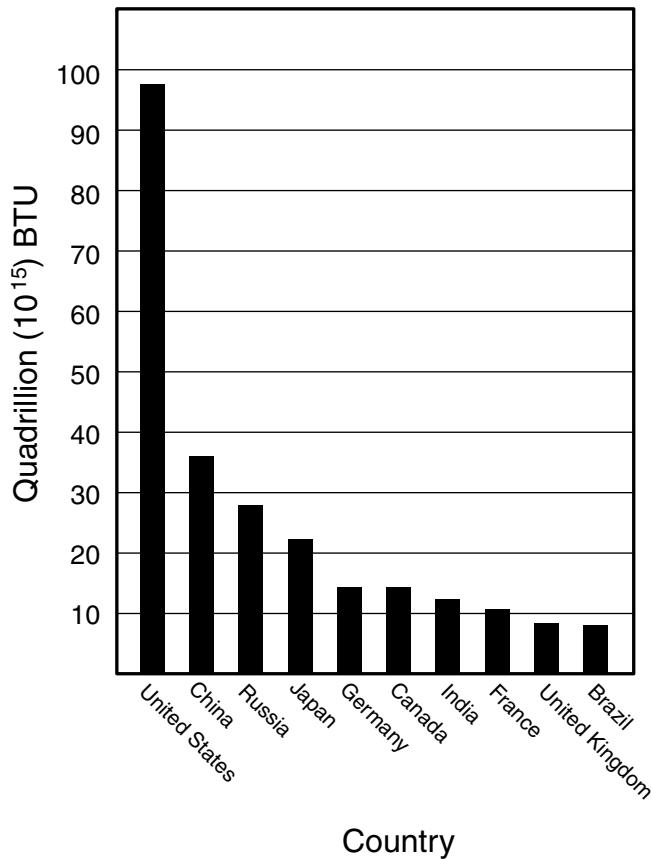
Top 10 Producers of Energy, 2000


Quadrillion (10^{15}) BTU

Country

Source: Energy Information Administration

47 Which conclusion can be drawn from the information in the graphs above?

  A India is more industrialized than China.

  B The United States uses more energy than it produces.

  C Brazil is less industrialized than Mexico.

  D The United Kingdom produces more energy than any other nation.

Use the photograph and your knowledge of social studies to answer the following question.
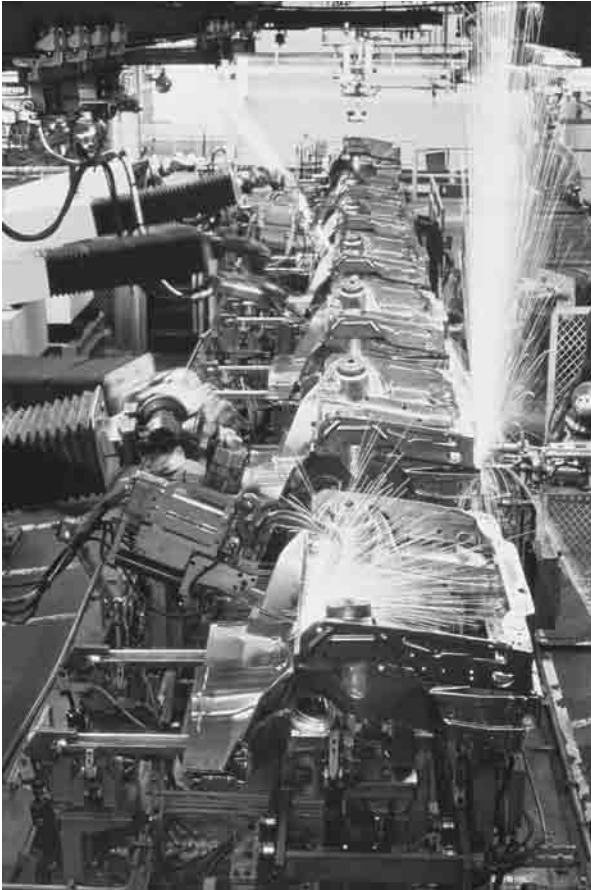
48 What effect have automated assembly lines, such as the one pictured above, had on industry?

    F They have resulted in the overproduction of consumer goods.

    G They have eliminated the need for safety standards in factories.

    H They have decreased the need for human workers.

   **J** They have greatly increased the need for unskilled labor.

Use the time line and your knowledge of social studies to answer the following question.

Computer Technology Time Line 1975–1995

1975
First personal computer developed

1977
Personal computers mass-marketed; corporations test fiber-optic cable

1979
Cellular phones tested in Japan and the United States

1985
Cellular phone service begins in Europe

1989
World Wide Web introduced in Europe

1995
First 24-hour Internet-only radio station begins broadcasting

49 It can be concluded from the information above that the development of computer technology in the late 20th century —

    A caused severe technological setbacks in Japan

    B led to advances in global communications

    C benefited corporations only in the United States

    D had little effect on international trade

GO ON

Use the map and your knowledge of social studies to answer the following question.
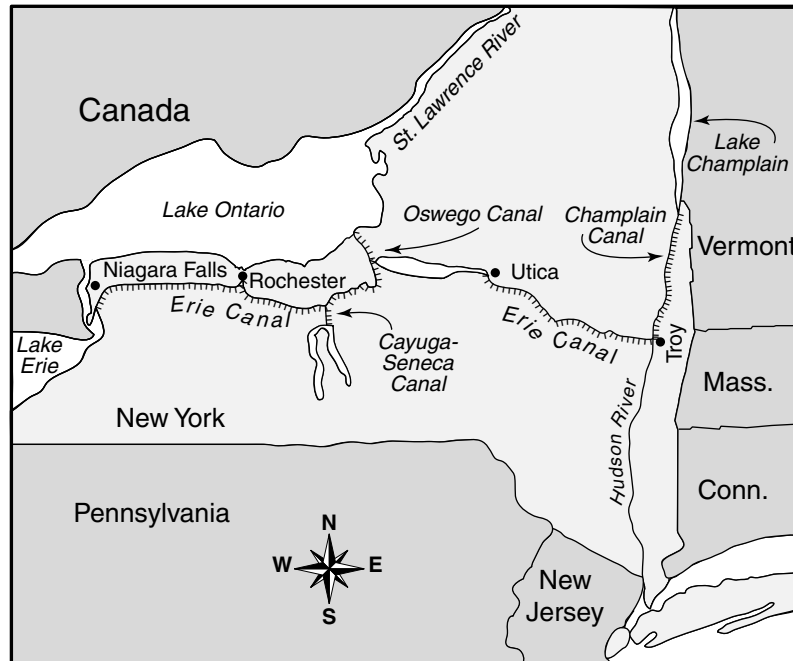
50 According to the map, which of the following waterways connects the cities of Rochester and Troy?

   F   Cayuga-Seneca Canal

   G   St. Lawrence River

   H   Hudson River

   J   Erie Canal

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS
ON THE ANSWER DOCUMENT.

Page 103

STOP

SCIENCE

FORMULA CHART

Density = $\dfrac{\text{mass}}{\text{volume}}$	$D = \dfrac{m}{v}$
$\left(\begin{array}{c}\text{heat gained}\\\text{or lost}\end{array}\right) = \left(\begin{array}{c}\text{mass in}\\\text{grams}\end{array}\right)\left(\begin{array}{c}\text{change in}\\\text{temperature}\end{array}\right)\left(\begin{array}{c}\text{specific}\\\text{heat}\end{array}\right)$	$Q = (m)(\Delta T)(C_p)$
Speed = $\dfrac{\text{distance traveled}}{\text{time}}$	$v = \dfrac{d}{t}$
Acceleration = $\dfrac{\text{final velocity} - \text{initial velocity}}{\text{change in time}}$	$a = \dfrac{v_f - v_i}{\Delta t}$
Momentum = mass $\times$ velocity	$p = mv$
Force = mass $\times$ acceleration	$F = ma$
Work = force $\times$ distance	$W = Fd$
Power = $\dfrac{\text{work}}{\text{time}}$	$P = \dfrac{W}{t}$
% efficiency = $\dfrac{\text{work output}}{\text{work input}} \times 100$	$\% = \dfrac{W_O}{W_I} \times 100$
Kinetic energy = $\dfrac{1}{2}$ (mass $\times$ velocity^2)	$KE = \dfrac{mv^2}{2}$
Gravitational potential energy = mass $\times$ acceleration due to gravity $\times$ height	$PE = mgh$
Energy = mass $\times$ (speed of light)^2	$E = mc^2$
Velocity of a wave = frequency $\times$ wavelength	$v = f\lambda$
Current = $\dfrac{\text{voltage}}{\text{resistance}}$	$I = \dfrac{V}{R}$
Electrical power = voltage $\times$ current	$P = VI$
Electrical energy = power $\times$ time	$E = Pt$

Constants/Conversions
g = acceleration due to gravity = 9.8 m/s^2
c = speed of light = 3×10^8 m/s
speed of sound = 343 m/s at sea level and 20°C
1 cm^3 = 1 mL
1 wave cycle/second = 1 hertz (Hz)
1 calorie (cal) = 4.18 joules
1000 calories (cal) = 1 Calorie (Cal) = 1 kilocalorie (kcal)
newton (N) = kg m/s^2
joule (J) = Nm
watt (W) = J/s = Nm/s
volt (V)   ampere (A)   ohm (Ω)

Periodic Table of the Elements

Key:
- Atomic number — 14
- Symbol — **Si**
- Atomic mass — 28.086
- Name — Silicon

Mass numbers in parentheses are those of the most stable or most common isotope.

Revised October 15, 2001

Group 1 IA	2 IIA	3 IIIB	4 IVB	5 VB	6 VIB	7 VIIB	8	9 VIII	10	11 IB	12 IIB	13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	18 VIIIA
1 **H** 1.008 Hydrogen																	2 **He** 4.0026 Helium
3 **Li** 6.941 Lithium	4 **Be** 9.012 Beryllium											5 **B** 10.81 Boron	6 **C** 12.011 Carbon	7 **N** 14.007 Nitrogen	8 **O** 15.999 Oxygen	9 **F** 18.998 Fluorine	10 **Ne** 20.179 Neon
11 **Na** 22.990 Sodium	12 **Mg** 24.305 Magnesium											13 **Al** 26.982 Aluminum	14 **Si** 28.086 Silicon	15 **P** 30.974 Phosphorus	16 **S** 32.066 Sulfur	17 **Cl** 35.453 Chlorine	18 **Ar** 39.948 Argon
19 **K** 39.098 Potassium	20 **Ca** 40.08 Calcium	21 **Sc** 44.956 Scandium	22 **Ti** 47.88 Titanium	23 **V** 50.942 Vanadium	24 **Cr** 51.996 Chromium	25 **Mn** 54.938 Manganese	26 **Fe** 55.847 Iron	27 **Co** 58.933 Cobalt	28 **Ni** 58.69 Nickel	29 **Cu** 63.546 Copper	30 **Zn** 65.39 Zinc	31 **Ga** 69.72 Gallium	32 **Ge** 72.61 Germanium	33 **As** 74.922 Arsenic	34 **Se** 78.96 Selenium	35 **Br** 79.904 Bromine	36 **Kr** 83.80 Krypton
37 **Rb** 85.468 Rubidium	38 **Sr** 87.62 Strontium	39 **Y** 88.906 Yttrium	40 **Zr** 91.224 Zirconium	41 **Nb** 92.906 Niobium	42 **Mo** 95.94 Molybdenum	43 **Tc** (98) Technetium	44 **Ru** 101.07 Ruthenium	45 **Rh** 102.906 Rhodium	46 **Pd** 106.42 Palladium	47 **Ag** 107.868 Silver	48 **Cd** 112.41 Cadmium	49 **In** 114.82 Indium	50 **Sn** 118.71 Tin	51 **Sb** 121.763 Antimony	52 **Te** 127.60 Tellurium	53 **I** 126.904 Iodine	54 **Xe** 131.29 Xenon
55 **Cs** 132.905 Cesium	56 **Ba** 137.33 Barium	57 **La** 138.906 Lanthanum	72 **Hf** 178.49 Hafnium	73 **Ta** 180.948 Tantalum	74 **W** 183.84 Tungsten	75 **Re** 186.207 Rhenium	76 **Os** 190.23 Osmium	77 **Ir** 192.22 Iridium	78 **Pt** 195.08 Platinum	79 **Au** 196.967 Gold	80 **Hg** 200.59 Mercury	81 **Tl** 204.383 Thallium	82 **Pb** 207.2 Lead	83 **Bi** 208.980 Bismuth	84 **Po** (209) Polonium	85 **At** (210) Astatine	86 **Rn** (222) Radon
87 **Fr** (223) Francium	88 **Ra** 226.025 Radium	89 **Ac** 227.028 Actinium	104 **Rf** (261) Rutherfordium	105 **Db** (262) Dubnium	106 **Sg** (263) Seaborgium	107 **Bh** (262) Bohrium	108 **Hs** (265) Hassium	109 **Mt** (266) Meitnerium	110 (269)								

Lanthanide Series

58 **Ce** 140.12 Cerium	59 **Pr** 140.908 Praseodymium	60 **Nd** 144.24 Neodymium	61 **Pm** (145) Promethium	62 **Sm** 150.36 Samarium	63 **Eu** 151.97 Europium	64 **Gd** 157.25 Gadolinium	65 **Tb** 158.925 Terbium	66 **Dy** 162.50 Dysprosium	67 **Ho** 164.930 Holmium	68 **Er** 167.26 Erbium	69 **Tm** 168.934 Thulium	70 **Yb** 173.04 Ytterbium	71 **Lu** 174.967 Lutetium

Actinide Series

90 **Th** 232.038 Thorium	91 **Pa** 231.036 Protactinium	92 **U** 238.029 Uranium	93 **Np** 237.048 Neptunium	94 **Pu** (244) Plutonium	95 **Am** (243) Americium	96 **Cm** (247) Curium	97 **Bk** (247) Berkelium	98 **Cf** (251) Californium	99 **Es** (252) Einsteinium	100 **Fm** (257) Fermium	101 **Md** (258) Mendelevium	102 **No** (259) Nobelium	103 **Lr** (262) Lawrencium

SAMPLE A

When a 10% hydrochloric acid solution is heated in an open test tube, the test tube should always be pointed —

A   so bubbles are visible

B   at a 180° angle from the flame

C   toward a ventilated area

**D**   away from nearby people
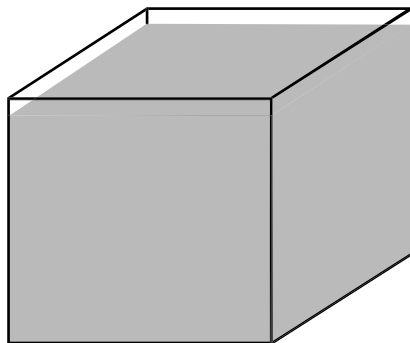
Mass = 40 g

Volume = 20 mL

The picture shows a cube that contains 20 mL of a solution. The solution has a mass of 40 grams. What is the density in g/mL of this solution? Record and bubble in your answer on the answer document.
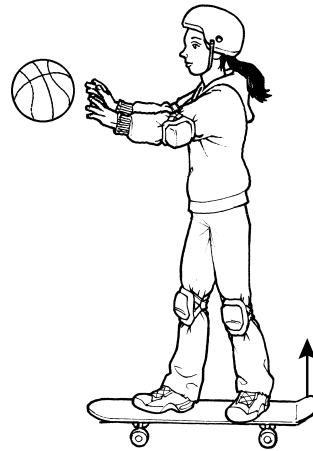
1 The illustration above shows a student about to throw a ball while standing on a skateboard. Which illustration below correctly shows the skateboard's direction of motion after the student releases the ball?

A

C

B

D

GO ON ▶
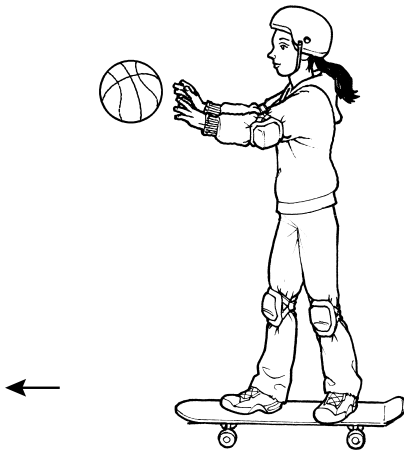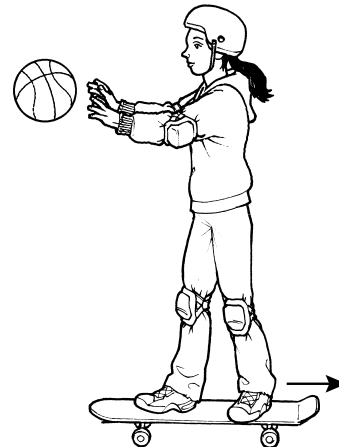
Potential Hazards of Petroleum Naphtha, Hexane, Toluene, and Acetone

May cause eye, skin, nose, and throat irritation. Inhaling or swallowing vapors may be harmful or fatal. Known to cause birth defects. Vapor may ignite explosively.

2 The ingredients described above are used to make a bonding agent. The most important safety precaution to take when applying this bonding agent is to —

F dry it with a small flame

G work in a well-ventilated area

H cover the work area with newspaper

J wear a lab coat

3 Which bike rider has the greatest momentum?

A A 40 kg person riding at 45 km/h

B A 50 kg person riding at 35 km/h

C A 60 kg person riding at 25 km/h

D A 70 kg person riding at 15 km/h

4 Observing an approaching thunderstorm and using a stopwatch, a student finds that it takes 8.40 seconds for thunder to be heard after a lightning bolt strikes. The student has learned that it takes 3.0 seconds for sound to travel 1000 m. How far away is the storm?

F 119 m

G 185 m

H 2800 m

J 8400 m

5 Which lab setup would be appropriate to use in heating 100 mL of water to the boiling point?

A A 10 mL test tube held above a Bunsen burner

B A 200 mL beaker placed on a hot plate

C A thermal coil inside a 100 mL cylinder

D A sealed 300 mL flask in a warm-water bath

6 Which of the following is directly caused by muscle action?

F Regeneration of nerves

G Healing of wounds

H Release of hormones

J Extension of limbs

GO ON

Pond Food Web

Niche	Organisms
Producers	Algae and duckweed
Primary consumers	Mosquito larvae and small fish
Secondary consumers	Mosquitoes and minnows
Tertiary consumers	Frogs and purple martins

7 A person living near this pond wants to reduce the mosquito population. The mosquito population included in this food web could be reduced by —

A planting more duckweed

B catching more minnows

C removing some martin houses

D adding more shelter for frogs

8 Food provides the human body with all of the following except —

F calories

G amino acid

H hydrochloric acid

J lipids

9 As a scuba diver goes deeper underwater, the diver must be aware that the increased pressure affects the human body by increasing the —

A body's temperature

B amount of dissolved gases in the body

C amount of suspended solids in the body

D concentration of minerals in the body

10 An oakworm caterpillar feeds on the leaves of an oak tree. This type of interaction is —

F mutualistic

G commensalistic

H competitive

J parasitic

GO ON
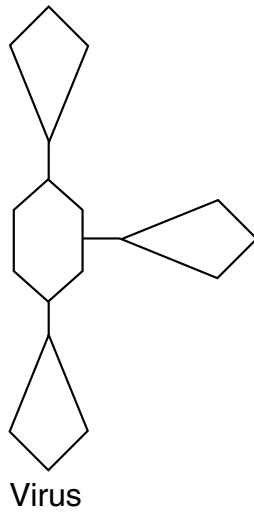
Virus

11 The diagram above represents a virus with its surface markers. The diagrams below show various animal cells with receptor sites. Which of the following cells is most likely affected by this virus?

A

Muscle cell

C

White-blood cell

B

Liver cell

D

Brain cell

GO ON
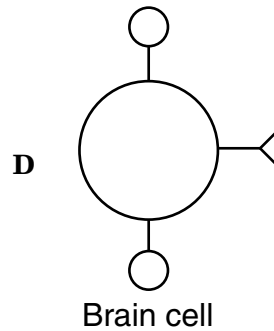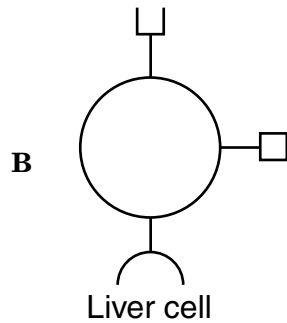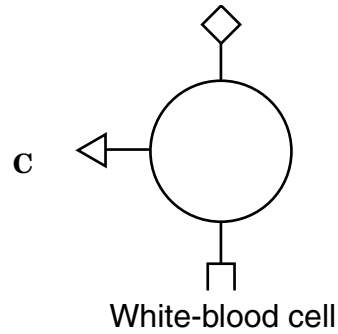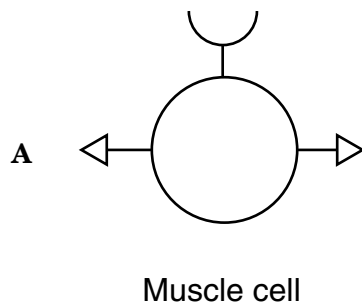
12 The maps below show the geographic ranges of four species of the order Lagomorpha, which includes rabbits and hares. In which range would developing white fur in winter most likely not be an advantage for a member of this order?

F
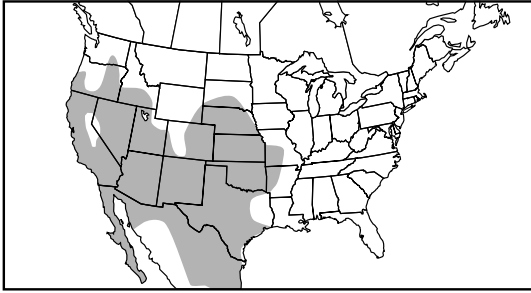
H
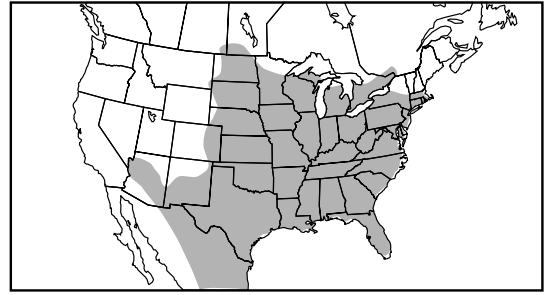
G
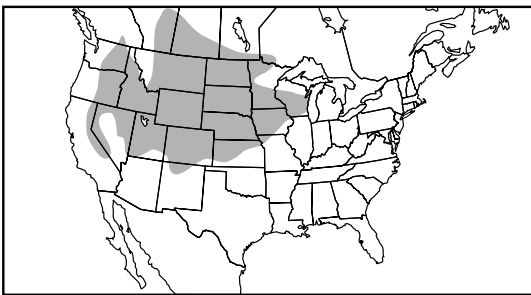
J
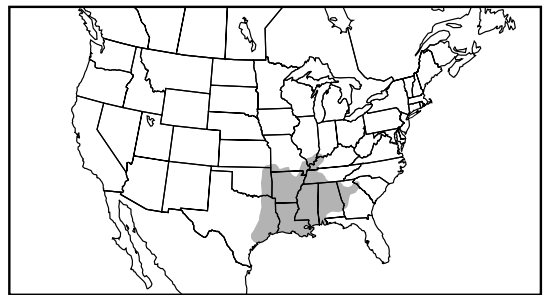
13 In experiments, a benefit of larger sample sizes would be more —

A variables

B representative data

C time per group

D control groups

14 Some antibiotics cause patients to exhibit digestive side effects. These side effects are most often the result of —

F bacteria being killed in the digestive tract

G the antibiotics being converted into stomach acids

H too much water being drawn into the digestive tract

J the stomach wall being torn

GO ON

Powerful Plankton

The U.S. Naval Research Laboratory has created an experimental marine fuel cell that could produce enough electricity to power ocean-monitoring devices. This fuel cell runs on seawater and sediment, with the help of plankton. Some plankton on the surface of ocean sediments use dissolved oxygen to break down organic matter, releasing energy; this is an aerobic process. The plankton in the deeper sediments break down organic matter without using oxygen; this is an anaerobic process. These two processes create a difference in voltage between the surface of the sediment and the sediment farther down in the seabed. The voltage difference can be used to produce electricity—up to 5.0×10^{-2} watts of power. Energy supplied by this type of fuel cell can be obtained as long as there is organic matter in the sediment.

15 Which safety precaution should be observed while analyzing sediment from a marine aquarium?

    A   Wear rubber gloves

    B   Use a fume hood

    C   Avoid using glassware

    D   Have a fire extinguisher nearby

17 Some zooplankton belong to the kingdom Protista. Members of this kingdom are characterized as —

    A   having segmented bodies with jointed appendages

    B   containing one or more eukaryotic cells

    C   laying eggs with a leathery protective shell

    D   having a four-chambered heart

16 Fuel cells powered by plankton from the seabed can be used to operate instruments that monitor ocean currents and water temperature. These fuel cells get their energy by converting —

    F   chemical energy to electrical energy

    G   electrical energy to mechanical energy

    H   hydroelectric energy to geothermal energy

    J   mechanical energy to chemical energy

18 What is the mass of a 500.00 mL sample of seawater with a density of 1.025 g/mL?

    F   487.8 g

    G   500.0 g

    H   512.5 g

    J   625.0 g

GO ON

19 After being introduced in the 1930s, the fire ant (*Solenopsis invicta*) became established throughout much of the southern United States. One biological way to control fire ants might be to introduce organisms that are —

    A   mutualistic with fire ant queens

    B   nurtured by fire ant workers

    C   preyed on by fire ant drones

    D   parasitic to fire ant larvae
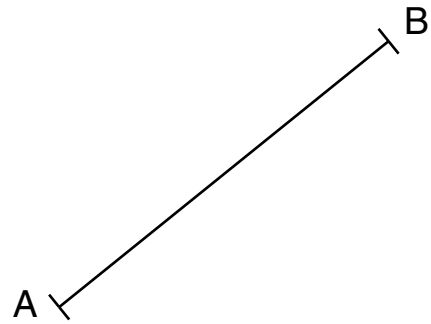
20 An ant crawled from Point A to Point B in 4.0 seconds. To the nearest tenth, what was the ant's speed in centimeters per second? Record and bubble in your answer on the answer document.

21 DNA molecules separate into single strands, which are then used to construct two identical strands of DNA. This process ensures that the —

A cytoplasm is in equilibrium

B mitochondria are genetically identical to the chloroplasts

C parent cells use little ATP

D daughter cells are genetically identical to the parent cells

22 Which of the following is an example of a chemical change?

F Ice cracking

G Sugar dissolving

H Milk souring

J Lead melting

23 From 1942 to 1945, U.S. nickels were made of an alloy that contained 35% silver, 9.0% manganese, and the rest copper, by mass. If one of these nickels has a mass of 5.0 grams, what is the mass of the copper?

A 0.5 g

B 1.8 g

C 2.2 g

D 2.8 g

24 Which factor makes water an effective solvent?

F The presence of molecular oxygen

G Its lack of covalent bonds

H The polar nature of its molecules

J Its abundance on Earth's surface

25 Which of the following procedures should be used in finding the mass of crystals?

A Pour the excess crystals back into the original container

B Put the crystals on the outer part of the balance pan for massing

C Pour wastes down the sink with plenty of water

D Use weighing paper on the balance pan

26 Ultraviolet radiation can cause mutations in the DNA of skin cells that have been overexposed to the sun. This mutated DNA has no effect on future offspring because —

F changes in skin cell DNA are homozygous recessive

G mutations must occur within the RNA codons

H offspring reject parental skin cells

J only changes to gamete DNA can be inherited

GO ON

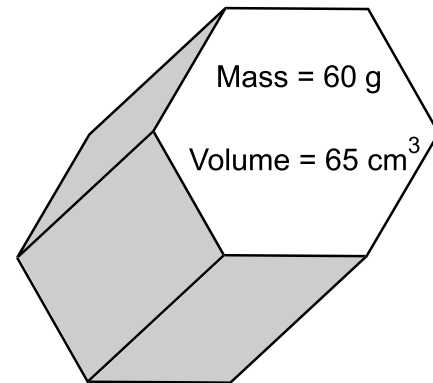**27** Which of the following objects will float on water?

A

Mass = 45 g

Volume = 40 cm^3

C

Mass = 55 g

Volume = 50 cm^3

B

Mass = 50 g

Volume = 45 cm^3

D

Mass = 60 g

Volume = 65 cm^3

Sunlight → Grass, Corn

Corn → Caterpillar

Grass → Deer, Mouse, Ant

Corn → Mouse, Ant

Caterpillar → Ant, Bird, Fly larva

Bird → Fly larva
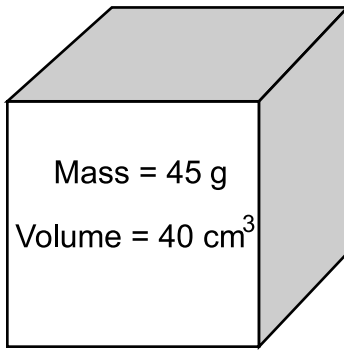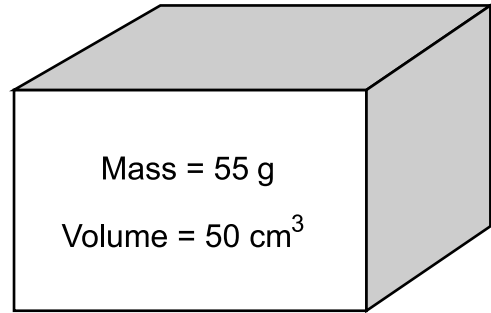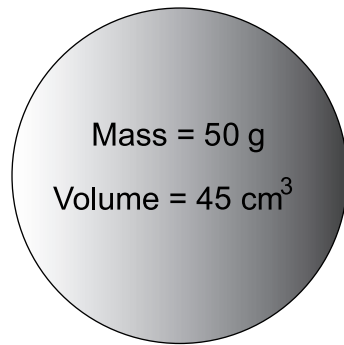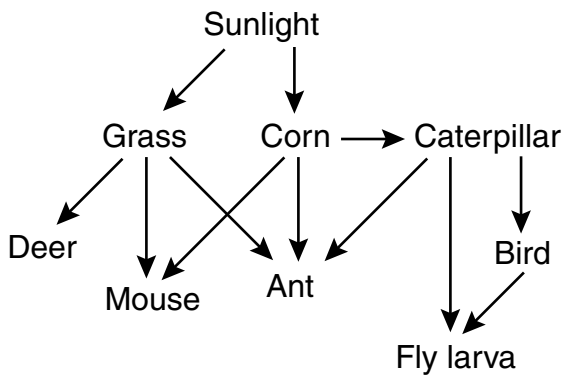
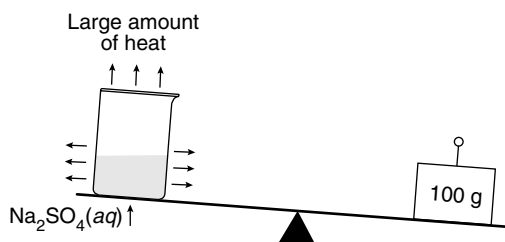**28** According to this food web, which of these is an omnivore?

F Caterpillar

G Mouse

H Ant

J Fly larva

29 An unknown silvery powder has a constant melting point and does not chemically or physically separate into other substances. The unknown substance can be classified as —

A an element

B a compound

C a mixture

D an alloy

GO ON
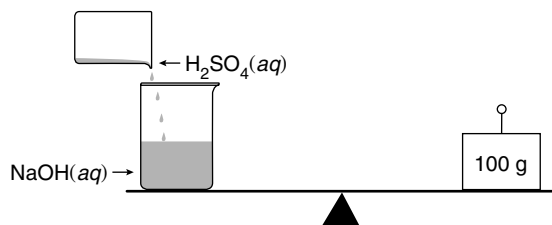
INITIAL
(after H₂SO₄ is completely added)

FINAL
(after exothermic reaction is completed)

$$H_2SO_4 + 2NaOH \rightarrow Na_2SO_4 + 2H_2O$$
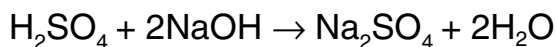
30 The illustrations show a conservation-of-mass experiment. The solution in the beaker lost mass because —

F materials have less mass at high temperatures

G the mass of the reactants and products was less than 100 g

H sodium sulfate (Na_2SO_4) is lighter than air

J some of the water molecules turned into gas

31 Which of these describes a pollution-producing process that involves only a physical change?

A Coal with a high sulfur content is burned, producing gases that cause acid rain.

B Chlorofluorocarbons are released, changing ozone in the upper atmosphere into oxygen.

C Hot wastewater is discharged into a lake, lowering oxygen levels in the water.

D Nitrogen oxide emissions combine with water vapor, producing nitric acid.

32 Which of the following characteristics could help short plants survive in areas with limited sunlight?

F Broad leaf surfaces

G Brightly colored flowers

H Thick stems

J Shallow roots

33 A man who was sleeping wakes up because he hears the smoke alarm go off in his house. Before opening the bedroom door, the man feels the door to see whether it is warm. He is assuming that heat would be transferred through the door by —

A conduction

B convection

C radiation

D compression

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GO ON

Tertiary consumers

Secondary consumers

Primary consumers

Producers
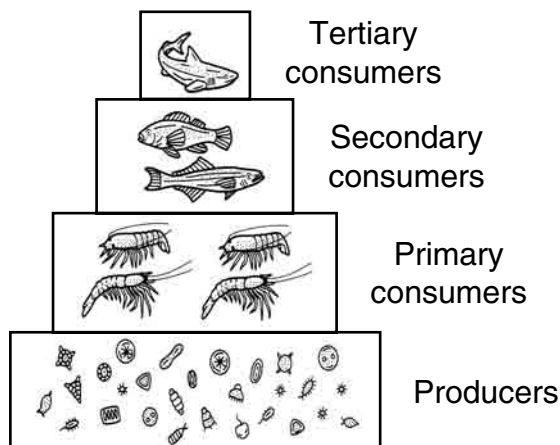
34 The difference in the size of each layer of this food pyramid is primarily the result of the difference in —

F food choices of individual niches

G oceanic zones of habitat

H the amount of food energy at each trophic level

J the relative heights of the organisms

An activity is designed that allows a student to observe the temperature changes in a cup of water. A piece of metal taken from a beaker of boiling water is placed in a cup containing water at room temperature. A glass alcohol thermometer is used to measure temperature changes.

35 A safety checklist for this activity should include the presence of a proper fire extinguisher and all the following items except a —

A fire blanket

B receptacle for broken glass

C laboratory apron

D squeeze bottle

$3'$AATCGC $5'$

36 Which of the following nucleotide base sequences complements the section of DNA modeled above?

F $^{5'}$UTCGCA$^{3'}$

G $^{5'}$TTAGCG$^{3'}$

H $^{5'}$GCGATT$^{3'}$

J $^{5'}$TTUCGC$^{3'}$

37 Which illustration best demonstrates compression waves?
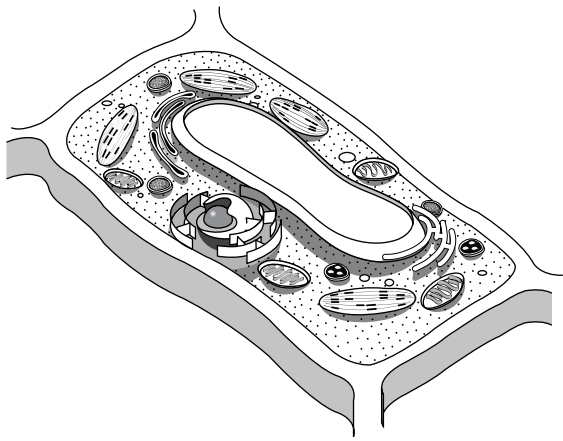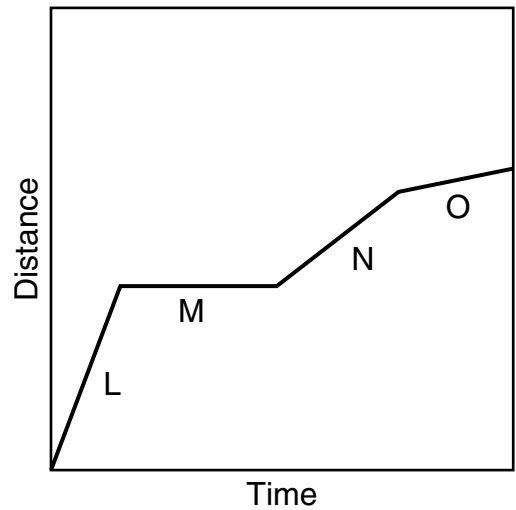
A
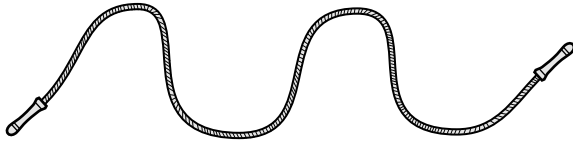
B
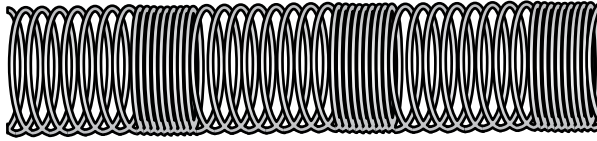
C
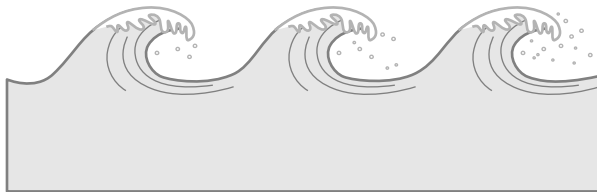
D

38 The cell above most likely belongs to an organism of the kingdom —

F Animalia

G Plantae

H Fungi

J Eubacteria

Speed of a Vehicle

39 The graph shows the distance traveled by a vehicle over a certain period of time. Which segment of the graph shows the vehicle moving with the greatest speed?

A L

B M

C N

D O

Allele	Trait	Type
G	Solid gray fur	Dominant
g	Striped gray fur	Recessive
B	Green eyes	Dominant
b	Blue eyes	Recessive

GgBb (male) × ggBB (female)

40 According to the table, which of the following phenotypes would probably occur in all the offspring from the parents shown above?

    F Solid gray fur

    G Striped gray fur

    H Green eyes

    J Blue eyes

41 Which system of the body would be directly affected if a large number of T cells were attacked by a virus?

    A Cardiovascular system

    B Immune system

    C Endocrine system

    D Respiratory system

42 In a movie, meteoroids make several microscopic holes in a pressurized cabin in the weightless environment of a spaceship. The astronauts search for the holes by spraying water droplets from a container. If this were an actual situation, what effect should be expected?

    F The drifting water droplets float to the location of the holes.

    G After falling to the floor, the water forms a stream leading to the holes.

    H The water droplets form a large sphere of water that moves away from the holes.

    J Pumping the trigger on the spray container increases the air pressure in the cabin.

GO ON

43 The following boxes represent a field. Which pattern for collecting 10 samples would provide the best data for identifying the types of plants in a field?
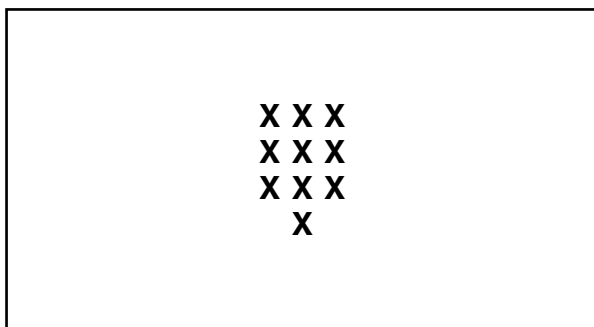
A

X X X X X

X X X X X

B

X   X
    X   X
  X
      X
          X
  X
    X   X

C

X X X
X X X
X X X
X

D

X X X   X X

X X   X X X
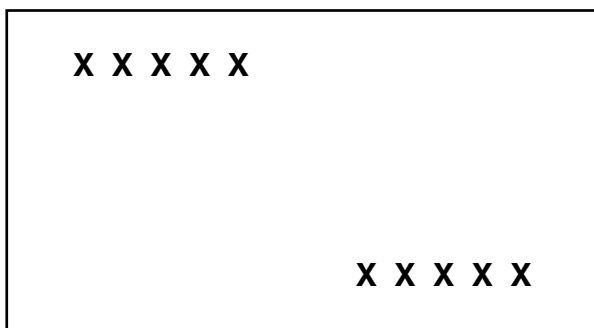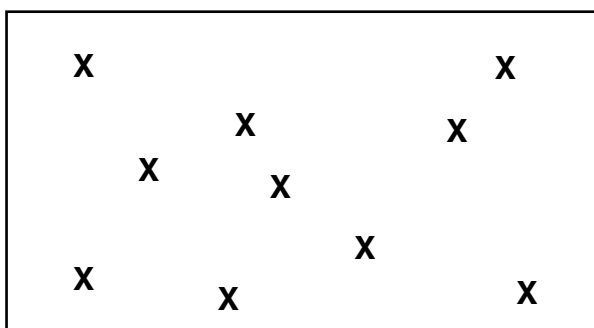
44 A hummingbird feeds on the nectar of a flowering plant. In this process the bird gains nutrition while spreading the plant's pollen to other flowers. The relationship between hummingbirds and flowering plants can be described as —

F commensal

G predatory

H parasitic

J mutualistic

Typical Sky Conditions

Location in Relation to Front	Distance from Front (km)	Sky Conditions
Ahead	1000	Cirrus clouds
Ahead	500	Altostratus clouds
Ahead	50	Stratus clouds
Behind	500	Clear
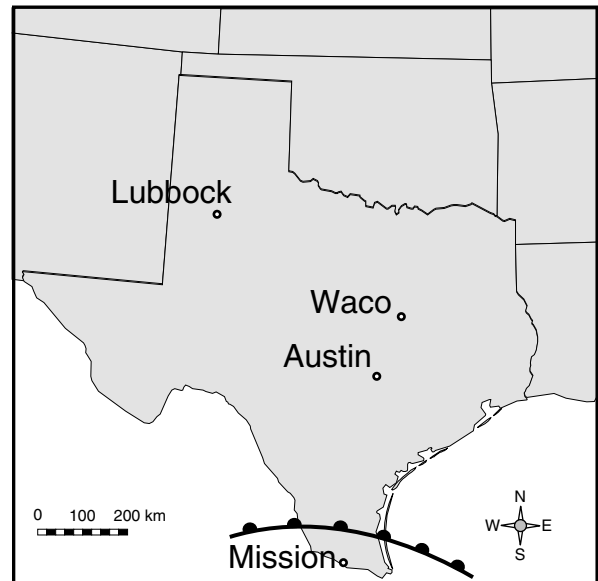
45 The cloud conditions above are typical of locations near a warm front. According to these data, what are the most likely sky conditions for Waco?

A Cirrus clouds

B Altostratus clouds

C Stratus clouds

D Clear skies

46 A pea plant with the genotype TtWW is crossed with a pea plant with the genotype ttWw. How many different genotypes can be expressed in the offspring?

F 1

G 2

H 3

J 4

V = 4.0 V

R = 12.5 ohms

I
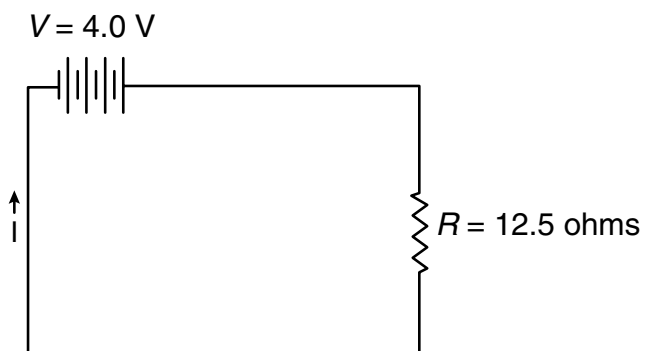
47 How much current is flowing through this circuit?

   A   0.32 A

   B   3.1 A

   C   4.0 A

   D   12.5 A

GO ON

48 An engineer has created a new engine for race cars. It is necessary to know which fuel mixture will allow the engine to run at its peak performance. Which experimental design is best for this investigation?

F Use one fuel mixture on the engine and measure its performance

G Use one fuel mixture on many types of engines and measure their performance

H Use various fuel mixtures on the engine and measure its performance

J Use various fuel mixtures on many types of engines and measure their performance

Clouds are more beautiful on winter days than on summer days.

49 This statement is a poor hypothesis because it is not —

A a question

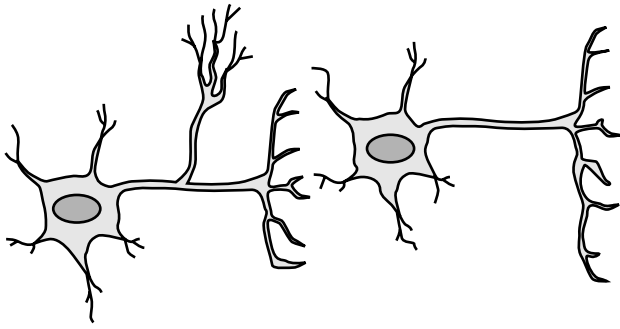**B** testable

C observable

D a comparison
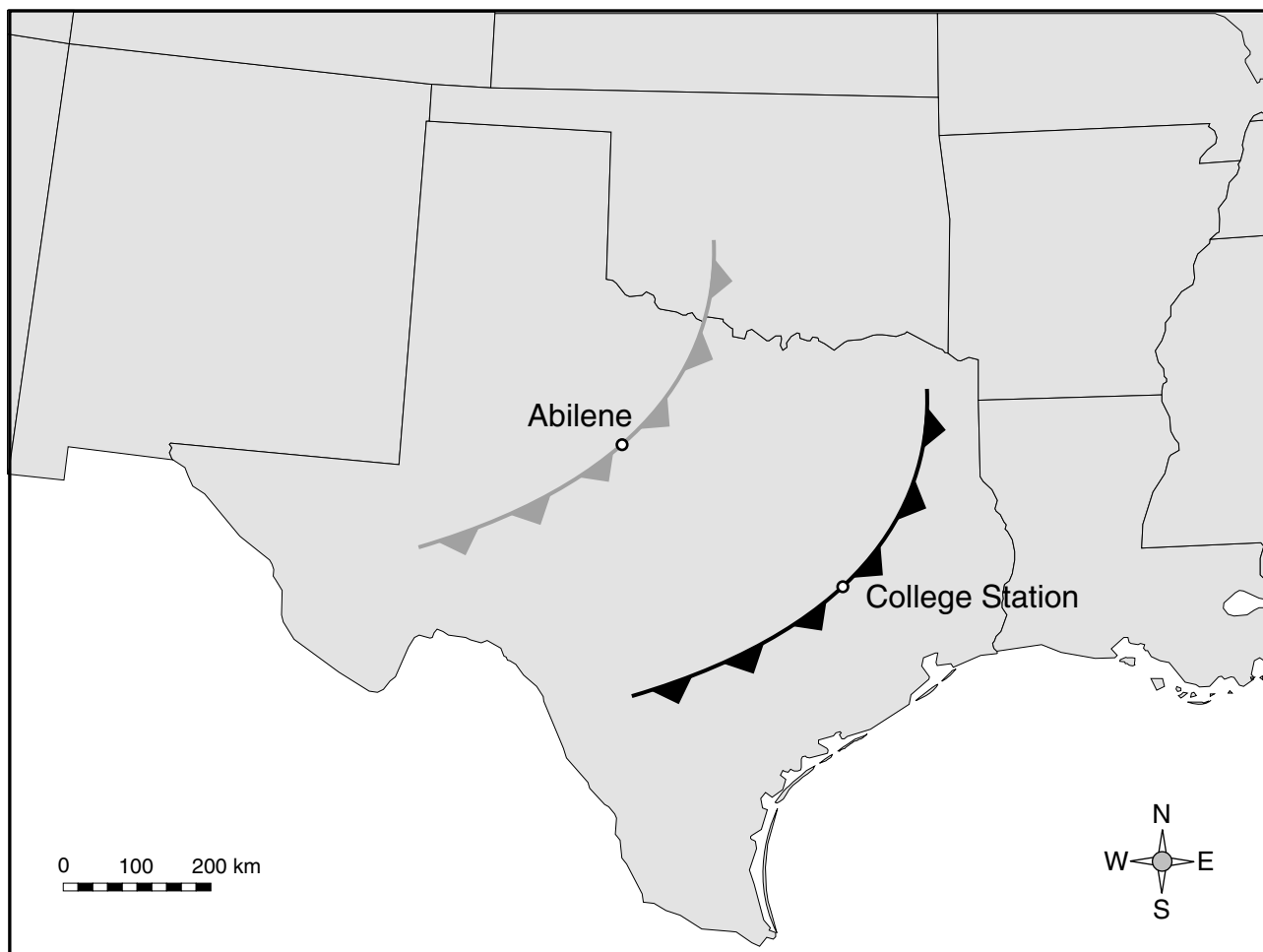
50 A cold front moves from Abilene to College Station in 6.0 hours. What is its average speed in km/h?

    F   0.018 km/h

    G   16 km/h

    H   58 km/h

    J   67 km/h

51 In the diagram above, one cell creates and releases chemicals that travel to a second cell and quickly induce that cell into action. This diagram represents part of the —

    A   endocrine system

    B   skeletal system

    C   muscular system

    D   nervous system

Atomic Radii
(nm)

H 0.030					
Li 0.123	Be 0.089	B 0.080	C 0.077	N 0.070	O 0.066
Na 0.157	Mg 0.136	Al 0.125	Si 0.117	P 0.110	S 0.104
K 0.203	Ca 0.174	Ga 0.125	Ge 0.122	As 0.121	Se 0.117

**52** The table shows the atomic radii of some elements in Periods 1 through 4 of the periodic table. Which inference can be made from this information?

F Atomic radii decrease from left to right.

G Atomic radii increase from bottom to top.

H Atomic radii decrease from right to left.

J Atomic radii double from top to bottom.

**53** What is the most common threat to a host organism posed by an invading virus?

A Production of viral fluids in the bloodstream

B Fermentation of acids in the digestive system

C Destruction of cells by viral reproduction

D Stimulation of muscle tone in the heart

GO ON

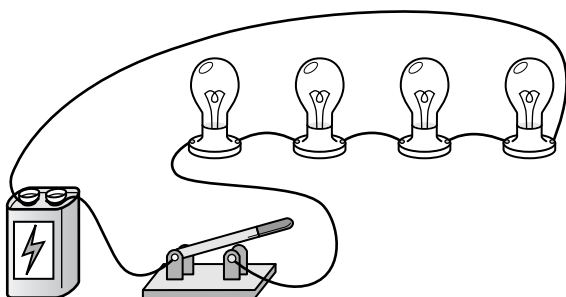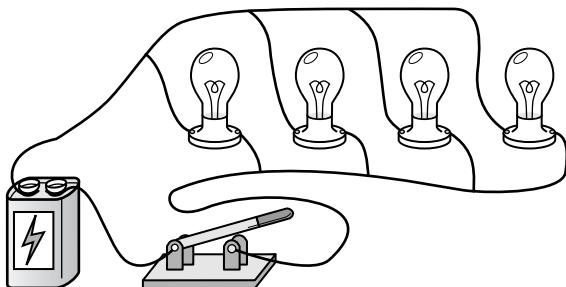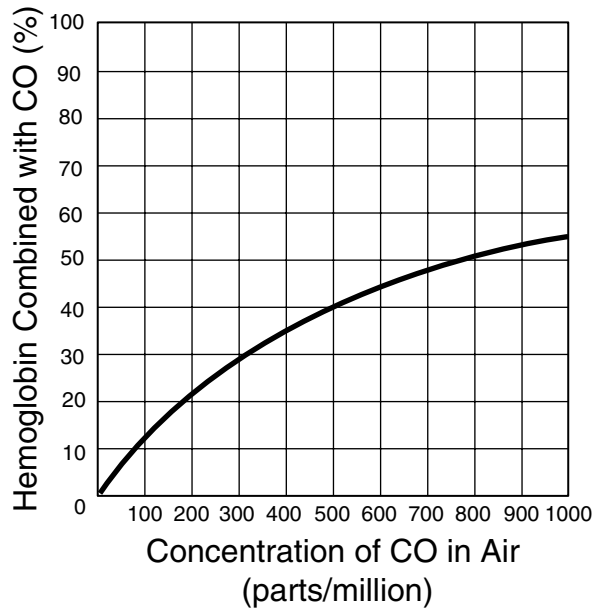**54** Which circuit is built so that if one lightbulb goes out, the other three lightbulbs will continue to glow?

F
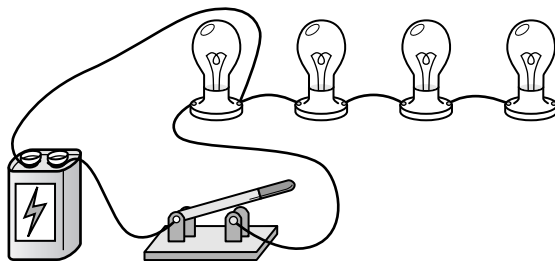
G
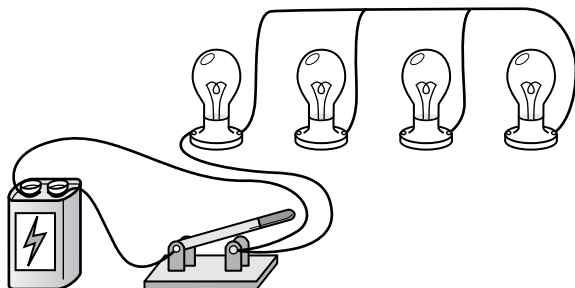
H

J

Health Effects of CO on Humans

Graph: Hemoglobin Combined with CO (%) vs. Concentration of CO in Air (parts/million)

55 The graph shows the percentage of hemoglobin that combines with carbon monoxide (CO) at various concentrations. Exposure to 400 parts per million of CO in air can cause people to experience nausea and a throbbing headache. According to the graph, about what percentage of hemoglobin is bound to CO at a CO concentration of 400 parts per million?

A 25%

B 35%

C 40%

D 55%