

ACT Practice Test

12th grade

18-19

ENGLISH TEST

45 Minutes—75 Questions

DIRECTIONS: In the five passages that follow, certain words and phrases are underlined and numbered. In the right-hand column, you will find alternatives for the underlined part. In most cases, you are to choose the one that best expresses the idea, makes the statement appropriate for standard written English, or is worded most consistently with the style and tone of the passage as a whole. If you think the original version is best, choose "NO CHANGE." In some cases, you will find in the right-hand column a question about the underlined part. You are to choose the best answer to the question.

You will also find questions about a section of the passage, or about the passage as a whole. These questions do not refer to an underlined portion of the passage, but rather are identified by a number or numbers in a box.

For each question, choose the alternative you consider best and fill in the corresponding oval on your answer document. Read each passage through once before you begin to answer the questions that accompany it. For many of the questions, you must read several sentences beyond the question to determine the answer. Be sure that you have read far enough ahead each time you choose an alternative.

PASSAGE I

Take Me Outside to the Ball Game

My sons are fortunate to have grown up in a city where major league baseball is played. When I was a child, it was a five-hour, once-a-summer trek, ¹ to the nearest major league ballpark. My sons have to endure only the twenty-minute ride to the stadium that we make five or six times a year. But I think my ² experience needless to say was richer than theirs. The stadium I remember had a natural grass field and seats piled up high and close to the players so we could hear them mutter. ³ Domed and bowl-shaped, my sons sit in a park where the players meander about on artificial turf that is not natural grass, and where we ⁴ sat at such a distance that the game appears to be ⁵ only a rumor. Fans should not have to endure these errors in aesthetics and architecture? ⁶

1. A. NO CHANGE
B. child, it was a five-hour, once-a-summer trek
C. child, it was a five-hour once-a-summer, trek
D. child it was a five-hour once-a-summer trek,
2. F. NO CHANGE
G. experience was
H. experience, needless to say, was
J. experience can be considered to be
3. A. NO CHANGE
B. My sons sit, in a park, domed and bowl-shaped
C. My sons in a park sit domed and bowl-shaped
D. My sons sit in a domed, bowl-shaped park
4. F. NO CHANGE
G. that is not real,
H. that's not grass
J. OMIT the underlined portion.
5. A. NO CHANGE
B. would set
C. sit
D. were sitting
6. F. NO CHANGE
G. in aesthetics, and architecture?
H. in aesthetics and architecture
J. in, aesthetics and architecture?

First, the turf should go. There should be nothing artificial about baseball, least of all the grass. The odd green shade of artificial turf is a poor counterfeit of grass green. When my sons and I visit the ballpark

we are essential on a picnic. Why gather around a

carpet, in which we can do just as well at home, to

enjoy our hot dogs, peanuts, and sodas? 10

Second, the dome should go. While it's true
that the dome blocks out rain, it also blocks out the sun
and sky. Baseball is a pastoral sport, where players lope
across the field, where a strong player can smack a ball
seemingly to the sky. Under a dome, the game is
hermetically sealed, the players' skins look sickly,
and the hit ball is in danger of banging a rafter. Finally,
I want my sons to be closer to the game. I don't want

us to be forced to the edge, of a bowled stadium, like
the remnants of unwanted cereal. I want us to hear the
ball slapping the catcher's mitt, and the shortstop
yelling "I got it!" when the ball is popped up in the
infield. Let us study an outfielders face, without the

7. A. NO CHANGE

B. Afterwards, when

C. Then, when

D. Thus, when

8. F. NO CHANGE

G. more essentially on

H. more essential to

J. essentially on

9. A. NO CHANGE

B. in being

C. which

D. OMIT the underlined portion

10. Which of the following sentences, if added here, would best reflect the point made in this paragraph?

F. Baseball is great.

G. We all need to get outside more.

H. We love hot dogs.

J. Give us the smell of fresh-mown grass.

11. A. NO CHANGE

B. Since it's

C. For it's

D. It's

12. F. NO CHANGE

G. (Do NOT begin new paragraph) Thus,

H. (Begin new paragraph) Finally,

J. (Begin new paragraph) For example,

13. A. NO CHANGE

B. edge of a bowled stadium, like,

C. edge of a bowled stadium like,

D. edge of a bowled stadium, like

14. F. NO CHANGE

G. outfielder's face,

H. outfielders' face,

J. outfielders face's,

1 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ 1

aid of binoculars. When he's sprinting toward the
infield to catch a short fly ball.

15. A. NO CHANGE
B. binoculars! When
C. binoculars; when
D. binoculars, when

Baseball is a game as much about atmosphere as athletics. Architects need to remember stadiums are playgrounds, not office buildings. If architects play fair, they will remember that, and my grandchildren will be thankful when they take their seats in the bleachers.

PASSAGE II

Bombay Parcel Post

[1]

Recently, while visiting a friend in the bustling city of Bombay, India, I discovered that mailing a package could be a very complicated, and instructive, process. I had bought some souvenirs there that I wanted to send home. My friend, a young man who had lived in Bombay his entire life except a few years

16. F. NO CHANGE
G. with the exception of
H. with the excepting of
J. yet for

spent studying in the United States, if he were to walk
with me to the post office.

17. A. NO CHANGE
B. walked
C. if he would walk
D. is walking

[2]

Merchants of all types were selling piles of cut sugarcane, colorfully dyed cloth, metal kitchen utensils, as well as many items I could not identify.

By pulling carts, oxen were amidst the automobile traffic. Men on bicycle rickshaws jingled bells to attract business and warn other drivers of their presence. People crowded the narrow streets, conversing, carrying on business, or just sitting and

18. F. NO CHANGE
G. Oxen pulled carts amidst
H. Oxen pulled carts, being amidst
J. Oxen were amidst while pulling carts in

1 watching the passing scene. 19

[3]

[1] We stopped outside the front gate of the large governmental post office of some size, and my friend showed me what to do. [2] We walked up to a line of workers, who were waiting patiently along a fence. [3] She carefully cut a piece of cotton cloth from a large bolt of the material. [4] She wrapped the package in it—a perfect fit! [5] I handed my package which I wanted to mail, to the first

person in line. 23

[4]

The man next to her took my package and carefully sewed the edges of the cloth with thick, black thread. 24 My package was then passed to the next

person in line, who with equal care, he sealed its edges with small circles of melted red wax, which quickly hardened in place. When the bundle was prepared, I took it inside to the mail counter, where it was weighed, stamped,

19. Which of the following sentences, if added at the beginning of Paragraph 2, would most effectively introduce the new subject of the paragraph?

- A. Our path took us through a clash and jangle of activity.
- B. It's interesting how post offices operate in other parts of the world.
- C. I was surprised to see that oxen were still used to pull carts.
- D. The rickshaw drivers were the busiest people on the streets.

20. F. NO CHANGE

- G. office, which was quite sizable, and
- H. office, so sizable that
- J. office, and

21. Which of the choices would NOT be acceptable here?

- A. She carefully cut (NO CHANGE)
- B. She cut careful
- C. Carefully she cut
- D. She cut with care

22. F. NO CHANGE

- G. package, intending to mail it
- H. package to be mailed
- J. package

23. For the sake of the unity and coherence of Paragraph 3, Sentence 5 should be placed:

- A. where it is now.
- B. after Sentence 1.
- C. after Sentence 2.
- D. after Sentence 3.

24. The writer wants to add a sentence here that would further exemplify the worker's care and attention to his task. Given all are true, which of the following would most effectively accomplish this?

- F. He paused often to talk to me and my friend.
- G. The heavy thread made a very noticeable seam.
- H. He took the time to line up each short, tight stitch.
- J. It seemed that he took great pride in his work.

25. A. NO CHANGE

- B. care to seal
- C. care sealing
- D. care sealed

1 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ 1

and sent on its way. [26]

[5]

The cost of this entire process was very reasonable,
and it took over an hour. During that time, as I talked to

27

the workers—with my friend's help—in Hindi. One man

28

returned my interest, and said, to me, "We will teach you
how to do this if you wish. I am sure that with a little

29

practice you could learn." [30] I gratefully declined.

30

26. In order to emphasize the pride the workers took in wrapping the narrator's package, the writer intends to add to the preceding sentence the following phrase:

to their satisfaction

The phrase would most effectively serve the above-stated purpose if added after the:

- F. word *prepared* and before the comma.
G. words *took it*.
H. word *counter* and before the comma.
J. words *it was*.

27. A. NO CHANGE

- B. time, when
C. time,
D. time that

28. F. NO CHANGE

- G. friends help—
H. friends' help—
J. friends help

29. A. NO CHANGE

- B. interest and said.
C. interest; and said
D. interest and said,

30. Which of the following sentences, if added at this point, would most directly convey to the reader the impression that the post office workers do not actually think the narrator could learn how to prepare packages for the mail?

- F. He smiled mischievously, and the others chuckled.
G. The workers all seemed happy to help.
H. They made it seem so simple that for a moment I thought about giving it a try.
J. Their warm, friendly expressions led me to take them at their word.

PASSAGE III

So You Want to Be in Show Business

[1]

The actors who perform in television commercials are some of the most fortunate people in show business. But their faces aren't as well known as are most movie actors'. Television commercials are big business. The average two-minute national commercial has a shooting budget greater than budgets for some movies. A performer could live for a year on the wages earned from a single commercial.

31. Which of the choices, all true, would best support the claim made in the preceding sentence while remaining consistent with the focus of Paragraph 1?

- A. NO CHANGE
B. If they are lucky, these actors can move from commercials to film.
C. But the fact remains that actors in television commercials work just as hard at their craft as do most movie actors.
D. Performers who act in commercials are generally paid more than most movie actors.

[2]

As a result, the competition for roles in commercials have been fierce. A casting company will typically audition hundreds of people for one or two roles. Each role requires a certain physical type. So, while auditioning, performers tend to possess the same general physical characteristics.

[3]

Although casting decisions are usually based on a performer's appearance, auditions are tension-filled and abrupt. Large groups of business types or athletic types or beach types assemble in a studio's lobby. After a seemingly endless wait, each performer takes a turn in front of the camera. Meanwhile, the performer smiles, states his or her name, and then leaves the room. The entire screen test lasts about forty-five seconds!

[4]

Performers in Hollywood and New York compare commercial auditions to a day at the beach.

The average performer is casting in only a tiny

proportion of the commercials auditioning for.

Although performers are picked for one commercial a year, they're considered lucky.

32. F. NO CHANGE

- G. were
- H. are
- J. is

33. A. NO CHANGE

- B. Thus possessing the same physical characteristics, the performers tend to audition.
- C. So, the performers who audition tend to possess the same general physical characteristics.
- D. So, the same general physical characteristics tend to be in the possession of the performers who audition.

34. F. NO CHANGE

- G. So, the
- H. The
- J. Nevertheless, the

35. Which of the choices most appropriately characterizes the nature of getting cast for a part as it is described in Paragraph 4?

- A. NO CHANGE
- B. lottery.
- C. curse.
- D. no-win situation.

36. F. NO CHANGE

- G. is cast
- H. cast
- J. casts off

37. A. NO CHANGE

- B. to audition
- C. auditioned
- D. auditions

38. F. NO CHANGE

- G. Since
- H. So
- J. If

[5]

The frustrations of being a commercial actor are enormous. For the patient, persistent, and lucky performer, though, the financial rewards more than ³⁹compensate for the many disappointments. Performers are paid, roughly: \$600 ⁴⁰per day of shooting. However,

the real money again ⁴¹comes in the form of "residuals": performers are paid each time their commercial airs on television. More than \$50,000 could be earned by a ⁴²commercial if a performer runs for a year. Not bad ⁴²

for two days' work! 43

39. A. NO CHANGE
B. performer though
C. performer; though
D. performer, though;
40. F. NO CHANGE
G. paid roughly, \$600.
H. paid roughly: \$600
J. paid roughly \$600
41. A. NO CHANGE
B. (Place before *performers*)
C. (Place before *each*)
D. (Place before *television*)
42. F. NO CHANGE
G. If the performer runs for a year, a commercial could earn more than \$50,000.
H. If the commercial runs for a year, the performer could earn more than \$50,000.
J. Commercials could earn more than \$50,000 if the performer runs for a year.
43. Which of the following statements, if added here, would best reinforce for the reader the main point made in Paragraph 5?
- A. Thus, for some actors in commercials, luck and perseverance can lead to impressive compensation.
B. But, it really isn't fair that only a few very lucky actors get to appear in commercials.
C. Therefore, the financial rewards for appearing in commercials are meager in comparison to the efforts of those who perform in the commercials.
D. Hence, commercial actors typically earn huge sums of money for working only two days.

Questions 44 and 45 ask about the preceding passage as a whole.

44. The writer is considering adding the following sentence to the essay:

The resulting videotape is later sent to the product sponsor; it's the company that makes the final casting decision.

If added, this sentence would most logically be placed after the last sentence of Paragraph:

- F. 2.
G. 3.
H. 4.
J. 5.

45. Suppose that the writer has been asked to write a brief essay illustrating some of the advantages and disadvantages of being an actor in television commercials. Does this essay successfully fulfill the assignment?

- A. Yes; the essay describes the frustrations of auditions and the slim chances of getting work, but it also mentions the rewards that can go to patient and lucky actors.
B. Yes; the essay focuses on the grueling hours of training actors must undergo to audition for commercials, but it also explains that they get paid very well for their work.
C. No; the essay portrays the life actors live as easy, since they can work two days and earn \$50,000 a year.
D. No; the essay focuses on the different types of actors that audition for parts, and on how frustrating those auditions are.

Leading the Cherokee

According to Wilma P. Mankiller, whose job was like running a large company. In 1993, she had a \$78 million budget and 1,200 employees, and she answered to 140,000 people. What will she do next? She was the elected principal chief of the Cherokee Nation in Oklahoma and the first woman in recorded history to lead a major North American Indian tribe.

In 1945, in Oklahoma, Mankiller (the name stems from a Cherokee military title) was born. She spent her teen years and her early adulthood in San Francisco. In 1969, just outside the city, American Indian demonstrators occupied Alcatraz Island to protest the government's treatment of American Indians. The protesters didn't like the way the government was treating American Indians. Listening to the activists, Mankiller realized that they were giving voice to feelings that she herself had. Mankiller began raising funds for the Alcatraz protestors and taking college courses in sociology. Several years later, she returned to Oklahoma with her two small daughters, determined to change her people's lives.

50 She led projects to build houses and

to bring running water to isolated towns. She

46. F. NO CHANGE
G. her job was
H. who's job was
J. the job being

47. A. NO CHANGE
B. What did she do?
C. Where will it all lead?
D. How does she do it?

48. F. NO CHANGE
G. Being in Oklahoma in 1945, Mankiller, the name stems from a Cherokee military title, was born.
H. Mankiller (the name stems from a Cherokee military title) was born in 1945 in Oklahoma.
J. Mankiller's name stems from a Cherokee military title, and in 1945 in Oklahoma, she was born.

49. A. NO CHANGE
B. They thought that the government was not treating American Indians fairly.
C. They were extremely upset with how the government treated American Indians.
D. OMIT the underlined portion.

50. Given that all are true, which of the following sentences, if added here, would most effectively introduce the new topic of this paragraph?
F. Mankiller focused on practical improvements in the rural, impoverished, fourteen-county region that makes up the Cherokee Nation.
G. Mankiller served as a role model to teenage girls by working hard for many years in order to help her people.
H. After San Francisco, this was the next logical step.
J. The Cherokee Nation that Mankiller returned to is located in northeastern Oklahoma.

51. A. NO CHANGE
B. bring about
C. bringing
D. OMIT the underlined portion.

1 ■ ■ ■ ■ ■ ■ ■ ■ 1

seeked start-up funding for the Cherokee

52

Gardens being a commercial gardening operation.

53

Her success with economic development led to her

54

election, in 1983, as deputy chief. Four years later,

54

Mankiller was elected principal chief. Still

emphasizing self-help as a route in order to get more

55

self-esteem, her and her colleagues created a

56

Department of Commerce to coordinate future

business development with the needs of existing

enterprises. Mankiller also established programs that

encourage students to read and write Cherokee and

57

to pass that knowledge to others.

The 1987 election was marred by controversy over

whether a woman could hack it, and Mankiller's margin

58

of victory was slim. [59] However, in the 1991 election, in

a tribute to her leadership skills and hard work, Mankiller

won by a landslide.

52. F. NO CHANGE

G. sought

H. had seeked

J. seeks

53. A. NO CHANGE

B. Gardens that was

C. Gardens, it was

D. Gardens,

54. F. NO CHANGE

G. Leading to her election in 1983 as deputy chief, her success was with economic development.

H. Her election in 1983 as deputy chief was resulting from her economic success.

J. In 1983, electing her as deputy chief, her success with economic development was recognized.

55. A. NO CHANGE

B. to route

C. as a route to

D. as a way to gain and achieve more

56. F. NO CHANGE

G. Mankiller and her colleagues created

H. created by Mankiller and her colleagues was

J. Mankiller's colleagues and her created

57. A. NO CHANGE

B. encourages

C. was encouraging

D. does encourage

58. F. NO CHANGE

G. had what it took,

H. was fit to lead,

J. could call the shots,

59. The writer is considering adding the following sentence:

Although the women's rights movement had helped many women in America gain upper-management positions in many companies, prejudices still existed.

Would this sentence be a relevant addition at this point in the essay, and why?

A. Yes, because it explains why Mankiller's margin of victory was so slim.

B. Yes, because it explains the comparison made at the beginning of the essay between Mankiller's job and running a large company.

C. No, because it contains information that detracts from the focus of this paragraph.

D. No, because it doesn't sufficiently explain how the women's rights movement helped professional women.

Question 60 asks about the preceding passage as a whole.

60. Suppose the writer had chosen to write a brief essay about the role of women in an American Indian tribe. Would this essay successfully fulfill the writer's goal?
- F. No, because the essay focuses on the life of one female American Indian leader and does not address the role of Cherokee women in general.
 - G. No, because the essay indicates that most American Indian tribes are led by men.
 - H. Yes, because the essay indicates that Mankiller had a difficult time getting elected at first because she was a woman.
 - J. Yes, because Mankiller is portrayed in the essay as representative of many Cherokee women.

PASSAGE V

Living with Extremes

Whenever I tell friends about the ten years I lived in Fairbanks, Alaska, I find myself focusing not on the desolate wilderness beauty nor on the frigid arctic temperatures. ⁶¹ But on the drastic differences in daylight hours of summer and winter. On the shortest December days in Fairbanks, a pale sun lifts slightly above the southern horizon for less than five dusky hours. ⁶² For weeks in the summer, conversely, residents of Fairbanks bask in what seems like eternal sunshine, with the sun barely dipping below the northern horizon near midnight. Both the extremes of darkness and light and the constantly shifting day length ⁶³ effects people in subtle and curious ways.

61. A. NO CHANGE
B. temperatures but
C. temperatures but,
D. temperatures: but
62. F. NO CHANGE
G. hours for
H. hours, for
J. hours: for
63. A. NO CHANGE
B. affects
C. effect
D. affect

64 Everything

has seemed possible;

65

one want to work or play all night. Some desperate

66

parents line their childrens bedroom window's with
aluminum foil to convince them that it is dark.

67

outside, and not inside, and time to go to bed. Other
parents give up the clock altogether and take their

68

children to sunny playgrounds in the middle of
the night in June and July.

69

On the other hand, summer days never
seem to end, winter days never seem to begin.

70

As the sun comes up later and later each winter
morning, many people's initiation lowers.

71

However, it just doesn't seem fair that the day's
duties should begin at eight or nine o'clock when

72

the sun won't rise until ten or eleven. Depression
often sets in and survival seem doubtful as people
go to work and come home in complete darkness.

73

Many people find themselves wanting to do less and

64. Which of the following would best introduce the information in this paragraph?

- F. Most people wish they could experience average days all the time.
- G. Summer days have an endless quality.
- H. Spring and fall aren't as odd as summer and winter.
- J. Everybody should know what Alaska is like.

65. A. NO CHANGE

- B. was
- C. seems
- D. seemed to be

66. F. NO CHANGE

- G. everyone
- H. people
- J. they

67. A. NO CHANGE

- B. children's bedroom windows
- C. childrens' bedroom windows
- D. childrens' bedroom windows'

68. F. NO CHANGE

- G. outside the home
- H. outside where they are
- J. outside

69. Which of the choices would be most consistent with the essay and best suggest the reason for going to playgrounds in the middle of the night?

- A. NO CHANGE
- B. popular
- C. nearby
- D. unusual

70. F. NO CHANGE

- G. Because
- H. While
- J. When

71. A. NO CHANGE

- B. initiate
- C. initiative
- D. initiator

72. F. NO CHANGE

- G. Nevertheless, it
- H. Still, it
- J. It

73. A. NO CHANGE

- B. survival itself often seems
- C. survival, it often seems
- D. survival seeming

1 less each day—wanting, rather, to sleep through the
winter like the hibernating bears.

Now having lived in central Michigan where
winter days are still considerably shorter than summer
days, but the rate of change is much slower and the
difference is less extreme. As the hours of sunlight
decrease in December, many people comment on
how dark it is by 5:00 P.M. These comments make me
realize perceptions are relative: I think Michigan
winter days are rather long.

74. F. NO CHANGE
G. while I live
H. living
J. I live

75. A. NO CHANGE
B. relative I think
C. relative, I think
D. relative; because I think

END OF TEST 1

STOP! DO NOT TURN THE PAGE UNTIL TOLD TO DO SO.



MATHEMATICS TEST

60 Minutes—60 Questions

DIRECTIONS: Solve each problem, choose the correct answer, and then fill in the corresponding oval on your answer document.

Do not linger over problems that take too much time. Solve as many as you can; then return to the others in the time you have left for this test.

You are permitted to use a calculator on this test. You may use your calculator for any problems you choose,

but some of the problems may best be done without using a calculator.

Note: Unless otherwise stated, all of the following should be assumed.

1. Illustrative figures are NOT necessarily drawn to scale.
2. Geometric figures lie in a plane.
3. The word *line* indicates a straight line.
4. The word *average* indicates arithmetic mean.

1. The lowest temperature on a winter morning was -8°F . Later that same day the temperature reached a high of 24°F . By how many degrees Fahrenheit did the temperature increase?

A. 3°
B. 8°
C. 16°
D. 24°
E. 32°

2. Disregarding sales tax, how much will you save when you buy an \$11 compact disc that is on sale for 25% off?

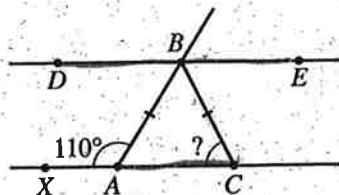
F. \$0.28
G. \$0.44
H. \$2.75
J. \$3.00
K. \$8.25

3. As part of a school project, Akio wants to find the average cost of renting a newly released videotape from video rental stores in his neighborhood. He surveys 4 stores and finds the cost of renting a newly released videotape from the 4 stores to be \$3.50, \$3.40, \$3.50, and \$3.00, respectively. Using this data, what is the average cost of renting a newly released videotape from these 4 stores?

A. \$3.25
B. \$3.30
C. \$3.35
D. \$3.45
E. \$3.50

4. In the figure below, \overline{AC} is parallel to \overline{DE} with X on \overline{AC} and B on \overline{DE} . Also $\overline{AB} \cong \overline{BC}$, and the measure of $\angle XAB$ is 110° . What is the measure of $\angle ACB$?

F. 35°
G. 40°
H. 55°
J. 70°
K. 110°

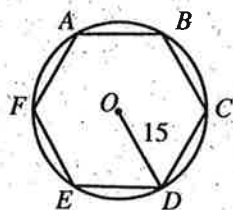


DO YOUR FIGURING HERE.



5. Regular hexagon $ABCDEF$ is inscribed in a circle, as shown below. If the length of radius \overline{OD} is 15 centimeters, how long is \overline{AB} , in centimeters?

- A. 15
B. 18
C. 30
D. 5π
E. $\frac{225\pi}{6}$

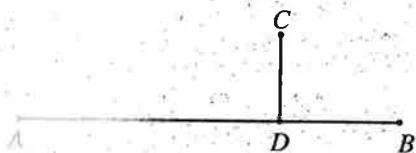


DO YOUR FIGURING HERE.

6. The price of a pumpkin is directly proportional to its weight. If a pumpkin that weighs 15.0 pounds costs \$3.25, how much will an 11.4-pound pumpkin cost?

- F. \$0.95
G. \$1.23
H. \$1.95
J. \$2.47
K. \$4.28

7. In the figure below, D is a point on \overline{AB} , and \overline{CD} is perpendicular to \overline{AB} . Based on this information, which of the following is the best conclusion?



- A. $\angle CDA \cong \angle CDB$.
B. $\angle CDA$ is larger than $\angle CDB$.
C. \overline{AB} bisects \overline{CD} .
D. \overline{CD} and \overline{DB} are equal in length.
E. Point C is equidistant from A and B .

8. If $3x - 7 = 4x - 16$, then $x = ?$

- F. -23
G. -9
H. $\frac{23}{7}$
J. $\frac{23}{7}$
K. 9

$$\begin{array}{r} 3x - 7 = 4x - 16 \\ -3x \quad -3x \\ \hline -7 = 1x - 16 \\ +16 \quad +16 \\ \hline 9 = x \end{array}$$

$$\begin{array}{r} -7 = 1x - 16 \\ +16 \quad +16 \\ \hline 9 = x \end{array}$$

9. Which of the following is always equal to $a(5 - a) - 6(a + 4)$?

- A. $-2a - 24$
B. $-2a + 4$
C. $-a^2 - a - 24$
D. $-a^2 - a + 4$
E. $-2a^3 - 24$



DO YOUR FIGURING HERE.

10. One marble is drawn at random from a bag containing 3 red, 2 blue, and 4 green marbles. What is the probability that the marble drawn is NOT blue?

F. $\frac{1}{2}$
 G. $\frac{2}{9}$
 H. $\frac{7}{9}$
 J. $\frac{7}{24}$
 K. $\frac{12}{81}$

11. Wanda programs her calculator to perform a linear function, but she doesn't tell you what that function is. When $n = 6$, the value of the function is 2. When $n = 12$, the value is 4. Which of the following expressions explains what the calculator will display when any number, n , is entered?

A. $\frac{n}{3}$
 B. $n - 4$
 C. $n - 8$
 D. $2n - 10$
 E. $2n - 20$

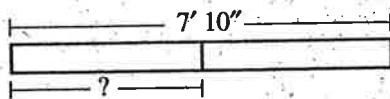
12. On the line segment below, the ratio of lengths XY to YZ is 1:3. What is the ratio of XY to XZ ?



F. 1:4
 G. 1:2
 H. 3:1
 J. 4:1
 K. Cannot be determined from the given information

13. If a board 7 feet 10 inches long is cut into 2 equal parts, as shown below, what will be the length, to the nearest inch, of each part?

A. 3' 5"
 B. 3' 9"
 C. 3' 11"
 D. 4' 2"
 E. 4' 5"

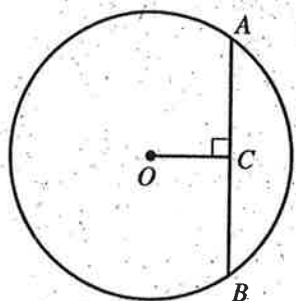


14. The speed of one train exceeds twice the speed of another by 30 mph. If r mph is the speed of the slower train, which of the following expresses the speed, in miles per hour, of the faster train?

F. $r + 15$
 G. $r - 30$
 H. $r + 30$
 J. $2r - 30$
 K. $2r + 30$



15. The circle shown below has a radius of 10 meters, and the length of chord \overline{AB} is 16 meters. If O marks the center of the circle, what is the length of \overline{OC} ?



DO YOUR FIGURING HERE.

- A. $2\sqrt{3}$
 B. 6
 C. 12
 D. $4\sqrt{21}$
 E. 36
16. What is the value of the expression $x^3 - 2x^2 + 4x + 4$ for $x = -2$?
- F. 12
 G. -2
 H. -4
 J. -8
 K. -20

17. What is the next term after $-\frac{1}{4}$ in the geometric sequence 16, -4, 1, $-\frac{1}{4}$, ...?

- A. $-\frac{1}{8}$
 B. 0
 C. $\frac{1}{16}$
 D. $\frac{1}{8}$
 E. $\frac{1}{2}$

18. On the blueprint for Betty's house, $\frac{1}{4}$ inch represents an actual length of 1 foot. What is the area, in square feet, of Betty's rectangular bedroom, which is $2\frac{1}{2}$ inches by 3 inches on the blueprint?

- F. 30
 G. 44
 H. 60
 J. 120
 K. 244

19. If $a > 0$ and $b < 0$, then the sum of a and b :

- A. is always positive.
 B. is always negative.
 C. is always zero.
 D. cannot be zero, but can be any other real number.
 E. can be any real number.



DO YOUR FIGURING HERE.

20. If $x + \frac{3}{4} = \frac{1}{28}$, then $x = ?$

F. 21

G. $\frac{11}{14}$

H. $\frac{1}{21}$

J. $-\frac{1}{16}$

K. $-\frac{5}{7}$

21. What is the slope of the line given by the equation $3x + 5y = -15$?

A. -3

B. $-\frac{5}{3}$

C. $-\frac{3}{5}$

D. 3

E. 5

22. The length of a side of a square is represented as $(2x - 3)$ inches. Which of the following general expressions represents the area of the square, in square inches?

F. $4x^2 - 12x + 9$

G. $4x^2 - 12x + 6$

H. $4x^2 - 6x + 9$

J. $4x^2 - 9$

K. $8x - 12$

23. Which of the following is a polynomial factor of $x^2 - 2x - 15$?

A. $15 - x$

B. $5 + x$

C. $3 + x$

D. $2 - x$

E. x

24. In the equation $m = \frac{3}{1+q}$, q represents a positive integer. As q gets larger and larger without bound, the value of m :

F. gets closer and closer to 0.

G. gets closer and closer to 1.

H. gets closer and closer to 3.

J. remains constant.

K. gets larger and larger.



DO YOUR FIGURING HERE.

25. The book *Fahrenheit 451* by Ray Bradbury is about a society in which all books are banned and burned. The title of the book gives the approximate temperature at which paper starts to burn. Since Fahrenheit, F , and Celsius, C , temperatures are related by the formula $C = \frac{5}{9}(F - 32)$, which of the following would make an equivalent title for the book?

A. *Celsius 219*
 B. *Celsius 233*
 C. *Celsius 268*
 D. *Celsius 754*
 E. *Celsius 844*

26. The length of a rectangle is 6 inches longer than the width. If the perimeter of the rectangle is 48 inches, what is the width, in inches?

F. 8
 G. 9
 H. 15
 J. 21
 K. 27

27. What are all the solutions for x if $2x^2 - 3x - 20 = 0$?

A. $x = -20$ only
 B. $x = -5$ or $x = 2$
 C. $x = -4$ or $x = \frac{5}{2}$
 D. $x = -\frac{5}{2}$ or $x = 4$
 E. $x = -2$ or $x = 5$

28. In Terrell's history class, all tests count equally. So far, Terrell has taken 2 of the 3 tests in history and earned scores of 93% and 82%, respectively. What is the minimum percent Terrell needs on the third test to have a test average of at least 85%?

F. 89%
 G. 88%
 H. 87%
 J. 83%
 K. 80%

29. If a , b , and c are positive integers such that $a^b = x$ and $c^b = y$, then $xy =$?

A. ac^b
 B. ac^{2b}
 C. $(ac)^b$
 D. $(ac)^{2b}$
 E. $(ac)^{b^2}$