AI Homework Helper

SSAT Middle Level Practice Test

Test 4

Test 4 · Grades 5-7 · Free PDF

WHAT'S INSIDE

Writing Sample	1 essay prompt
Verbal	60 questions
Quantitative	25 questions
Reading	40 questions
Quantitative	25 questions

Questions only. The answer key is not included. Work under timed conditions, then check any question you're unsure about with a step-by-step explanation.

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SECTION 1
WRITING THE ESSAY

Time: 25 minutes

Directions: Using two sheets of lined theme paper, plan and write an essay on the topic assigned below. DO NOT WRITE ON ANOTHER TOPIC. AN ESSAY ON ANOTHER TOPIC IS NOT ACCEPTABLE.

Topic: Why people visit museums?

Directions: Many people visit museums when they travel to new places. Why do you think people visit museums? Use specific reasons and examples to support your answer.

GO ON TO THE NEXT SECTION

SECTION 2
VERBAL REASONING

Time: 20 minutes
60 Questions

Directions: This section is divided into two parts that contain different types of questions. As soon as you have completed Part One, answer the questions in Part Two. You may write in your test booklet. For each answer you select, fill in the corresponding circle on your answer document.

Part One

Directions: Each question in Part One is made up of a word in capital letters followed by four choices. Choose the one word that is most nearly the same in meaning as the word in capital letters.

Example	**Answer**
SWIFT: (A) clean (B) fancy (C) fast (D) quiet	(A) (B) ● (D)

1. PERILOUS:
   (A) estranged
   (B) irregular
   (C) hazardous
   (D) careless
   (E) conniving
2. STATIONARY:
   (A) mobile
   (B) immobile
   (C) position
   (D) paper
   (E) moving
3. TRANSCRIBE:
   (A) circulate
   (B) author
   (C) request
   (D) copy
   (E) illustrate
4. PROFICIENT:
   (A) adept
   (B) prolific
   (C) professional
   (D) well-known
   (E) practice
5. DECEIVE:
   (A) mislead
   (B) pretend
   (C) examine
   (D) rearrange
   (E) stun
6. AGILE:
   (A) rested
   (B) nimble
   (C) strong
   (D) similar
   (E) anxious

7. DURATION:
   (A) former
   (B) wait
   (C) area
   (D) temptation
   (E) term
8. AMBIGUOUS:
   (A) adhere
   (B) aspire
   (C) unclear
   (D) certain
   (E) afflict
9. PREROGATIVE:
   (A) prerequisite
   (B) command
   (C) conviction
   (D) haggard
   (E) choice
10. INTRIGUING:
   (A) fascinating
   (B) business
   (C) boorish
   (D) furtive
   (E) mystery
11. AGENDA:
   (A) combination
   (B) receipt
   (C) schedule
   (D) agent
   (E) correspondence
12. CREDIBLE:
   (A) fortunate
   (B) believable
   (C) untrue
   (D) correct
   (E) suitable
13. PLACID:
   (A) public
   (B) explosive
   (C) quiet
   (D) crystalline
   (E) lenient
14. INTERVENE:
   (A) interfere
   (B) solve
   (C) intermediary
   (D) invert
   (E) induce
15. MUNDANE:
   (A) immense
   (B) common
   (C) extraordinary
   (D) weekly
   (E) stupid
16. DEHYDRATED:
   (A) waterless
   (B) worthless
   (C) deflated
   (D) pointless
   (E) airless
17. PREVALENT:
   (A) prior
   (B) preeminent
   (C) predominant
   (D) predictive
   (E) predating
18. SUCCINCT:
   (A) alert
   (B) despicable
   (C) superfluous
   (D) fearful
   (E) concise
19. NOCTURNAL:
   (A) by day
   (B) alternating
   (C) frequent
   (D) revolving
   (E) by night
20. EQUITABLE:
   (A) fair
   (B) unreasonable
   (C) biased
   (D) prejudiced
   (E) preferential

21. SATURATE:
(A) measure
(B) soak
(C) boil
(D) pour
(E) anger

22. GENTEEL:
(A) loud
(B) harmless
(C) refined
(D) stupid
(E) timid

23. WINSOME:
(A) critical
(B) small
(C) charming
(D) shy
(E) athletic

24. REPROACH:
(A) complain
(B) insist
(C) blame
(D) whine
(E) retreat

25. DEMONSTRATE:
(A) imply
(B) renew
(C) show
(D) require
(E) object

26. CAMOUFLAGE:
(A) helmet
(B) disguise
(C) outlook
(D) outfit
(E) jewelry

27. AGHAST:
(A) irritated
(B) shocked
(C) swollen
(D) rude
(E) nasty

28. RECOLLECT:
(A) remember
(B) invent
(C) remove
(D) discover
(E) reject

29. INITIATE:
(A) start
(B) gather
(C) celebrate
(D) try
(E) command

30. SUFFOCATE:
(A) surround completely
(B) give instruction
(C) deprive of air
(D) pull out
(E) make willing

Part Two

Directions: Each question below is made up of a sentence with one or two blanks. One blank indicates that one word is missing. Two blanks indicate that two words are missing. Each sentence is followed by four choices. Select the one word or pair of words that will best complete the meaning of the sentence as a whole.

Example	**Answer**
Ann carried the box carefully so that she would not _____ the pretty glasses.	● Ⓑ Ⓒ Ⓓ

(A) break
(B) fix
(C) open
(D) stop

When our boat first crashed into the rocks we were _____, but we soon felt _____ when we realized that nobody was hurt.

(A) afraid; relieved
(B) happy; confused
(C) sleepy; sad
(D) sorry; angry

ⓒ Ⓑ Ⓒ Ⓓ

31. Fossil is to petrified as _____.
    (A) fog is to dense
    (B) solution is to dissolved
    (C) gully is to craggy
    (D) wood is to hard
    (E) snowflake is wet
32. Sphere is to round as _____.
    (A) honeycomb is to hexagonal
    (B) rectangle is to shape
    (C) triangle is to line
    (D) protractor is to angle
    (E) ball is to rubber
33. Careful is to picky as _____.
    (A) concerned is to grateful
    (B) tired is to exhausted
    (C) forgiving is to peaceful
    (D) fancy is to short
    (E) alert is to asleep
34. Cave is to rock as apse is to _____.
    (A) plateau
    (B) patio
    (C) cliff
    (D) stage
    (E) church
35. Lemonade is to lemon as _____.
    (A) berry is to stain
    (B) glass is to ivory
    (C) juice is to cherry
    (D) stone is to mud
    (E) paper is to wood
36. Frog is to amphibian as whale is to _____.
    (A) branch
    (B) fur
    (C) mammal
    (D) toad
    (E) sea
37. Dentist is to drill as _____.
    (A) pilot is to wing
    (B) manager is to computer
    (C) surgeon is to scalpel
    (D) doctor is to stretcher
    (E) farmer is to grain
38. Mosaic is to tile as _____.
    (A) tapestry is to thread
    (B) billboard is to chart
    (C) poster is to frame
    (D) advertisement is to magazine
    (E) sweater is to wool
39. Pebble is to rock as drop is to _____.
    (A) sand
    (B) grain
    (C) fountain
    (D) boulder
    (E) liquid
40. Levee is to river as _____.
    (A) train is to track
    (B) path is to forest
    (C) shoulder is to road

(D) sail is to boat

(E) bridge is to truck

41. Injury is to heal as malfunction is to _____.

(A) misinterpret

(B) disassemble

(C) throw

(D) repair

(E) bandage

42. Jog is to sprint as trot is to _____.

(A) soar

(B) roam

(C) saunter

(D) ramble

(E) gallop

43. Bone is to body as _____.

(A) knob is to door

(B) driver is to car

(C) beam is to building

(D) floor is to house

(E) motor is to boat

44. Amorphous is to shape as odorless is to _____.

(A) weight

(B) worth

(C) scent

(D) anger

(E) appearance

45. Vain is to humble as _____.

(A) cantankerous is to thoughtless

(B) authoritative is to discursive

(C) extroverted is to shy

(D) judicious is to lenient

(E) anxious is to boisterous

46. Test is to study as _____.

(A) play is to rehearse

(B) office is to employ

(C) train is to practice

(D) income is to work

(E) job is to apply

47. Smile is to frown as cheer is to _____.

(A) extricate

(B) laugh

(C) wince

(D) leap

(E) jeer

48. Banana is to peel as _____.

(A) corn is to husk

(B) bread is to slice

(C) carrot is to uproot

(D) apple is to core

(E) egg is to crack

49. Touch is to tactile as _____.

(A) eye is to visual

(B) taste is to sense

(C) smell is to olfactory

(D) mouth is to oral

(E) sound is to noise

50. Articulateness is to speech as _____.

(A) ballet is to form

(B) legibility is to handwriting

(C) painting is to palette

(D) music is to note

(E) etiquette is to society

51. Poltroon is to pusillanimous as _____.

(A) progressive is to hidebound

(B) optimist is to sanguine

(C) cower is to coward

(D) dynamo is to supine

(E) jester is to lachrymose

52. Gold is to Midas as wisdom is to _____.

(A) Shakespeare

(B) conquest

(C) Athena

(D) Satan

(E) eagle

53. Tone is to deaf as _____.

(A) paint is to brush

(B) arm is to lift

(C) touch is to smell

(D) color is to blind

(E) sight is to sound

54. Radius is to diameter as _____.

(A) 9 is to 13

(B) 3 is to 8

(C) 4 is to 6

(D) 12 is to 15

(E) 5 is to 10

55. Oak is to acorn as _____.

(A) tree is to branch

(B) tulip is to bulb

(C) stable is to barn

(D) ruler is to line

(E) library is to book

56. $12\frac{1}{2}\%$ is to $\frac{1}{8}$ as _____.

(A) decade is to century

(B) 100% is to 1

(C) $\frac{6}{10}$ is to $\frac{1}{2}$

(D) $66\frac{2}{3}\%$ is to $\frac{2}{3}$

(E) second is to minute

57. Bibliophile is to library as _____.

(A) machinist is to repair

(B) infant is to adult

(C) dog is to biscuit

(D) neutron is to scientist

(E) philatelist is to post office

58. Galley is to kitchen as _____.

(A) ship is to house

(B) roof is to walls

(C) teeth is to stomach

(D) fabric is to yarn

(E) box is to package

59. Retina is to eye as _____.

(A) sun is to earth

(B) spur is to horse

(C) chair is to leg

(D) wagon is to car

(E) piston is to engine

60. Ballet is to choreographer as _____.

(A) pistol is to trigger

(B) dove is to peace

(C) play is to director

(D) paper is to ream

(E) people is to elect

GO ON TO THE NEXT SECTION

SECTION 3
QUANTITATIVE REASONING

Time: 35 minutes
25 Questions

Directions: Any figures that accompany questions in this section may be assumed to be drawn as accurately as possible EXCEPT when it is stated that a particular figure is not drawn to scale. Letters such as x, y and n stand for real numbers.
Each question consists of a word problem followed by four answer choices. You may write in your test booklet; however, you may be able to solve many of these problems in your head. Next take a look at the four answer choices and select the best one.

Example	If $3 + x = 5$, what is the value of x?	Answer
	(A) 0 (B) 1 (C) 2 (D) 3	(A) (B) ● (D)

1. If $\frac{1}{4}$ of a number is less than 16, then the number is always _____.
   (A) less than 64
   (B) equal to 4
   (C) greater than 4
   (D) equal to 64
   (E) greater than 64
2. In a basketball game, Team A scored 39 points and Team B scored more points than Team A. If Team B has 8 players, the average score of the players on Team B must have been at least how many points?
   (A) 1
   (B) 5
   (C) 6
   (D) 8
   (E) 12
3. In the triangle shown in Figure 1, what is the value of a?
   (A) 4
   (B) 6
   (C) 8
   (D) 9
   (E) It cannot be determined from the information given.

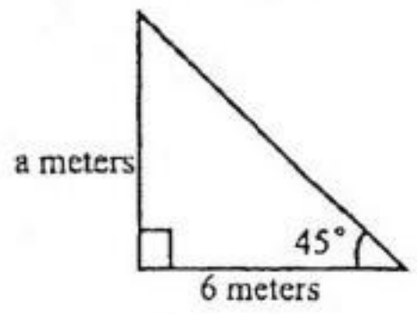


Figure 1

4. A man bought a piece of land for 60 thousand dollars. Then he spent 3 million dollars to build a house on it. The cost of the house is how many times the cost of the land?
   (A) 5
   (B) 20
   (C) 50
   (D) 200
   (E) 500
5. If $(x - y) + 2 = 6$ and y is less than 3, which of the following CANNOT be the value of x?
   (A) -3

(B) 0

(C) $1\frac{1}{2}$

(D) 4

(E) 8

6. In Figure 2, the distance from A to D is 110 and the distance from A to B is equal to the distance from C to D. If the distance from A to B is twice the distance from B to C, how far apart are B and D?

(A) 11

(B) 30

(C) 33

(D) 44

(E) 66

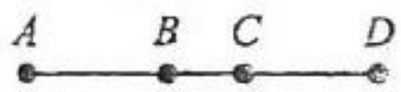


Figure 2

7. A book is placed on a flat table surface, as shown in Figure 3. Which of the following best shows all of the points where the book touches the table?

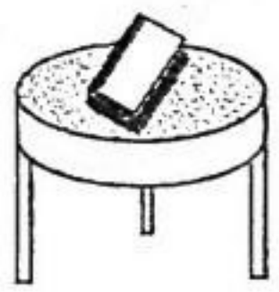


Figure 3

(A) 

(B) 

(C) 

(D) 

(E) 

8. Which of the following can be expressed as $(J+5)\times 3$ where J is a whole number?

(A) 40

(B) 52

(C) 65

(D) 74

(E) 81

9. If $a-7=3b-3$, what does $a\div 5$ equal?

(A) $b-1$

(B) $4b-1$

(C) $3b+9$

(D) $3b+16$

(E) It cannot be determined from the information given.

10. According to a census report for Country A, 10.75 out of every 100 families live in rural areas. Based on this report, how many of the 20 million families in Country A live in rural areas?

(A) 430,000

(B) 215,000

(C) 43,000

(D) 4,300

(E) 430

11. $\frac{7}{8}-\frac{6}{8}=$ _____.

(A) 0.58

(B) 0.5

(C) 0.375

(D) 0.25

(E) 0.125

12. At sunset the temperature was 10 degrees. By midnight it had dropped another 16 degrees. What was the temperature at midnight?

(A) 12 degrees below zero.

(B) 6 degrees below zero.

(C) 0 degrees.

(D) 12 degrees above zero.

(E) 20 degrees above zero.

13. According to the graph in Figure 4, how many chocolate ice cream cones were sold?

(A) 25

(B) 30

(C) 50

(D) 75

(E) 100



Figure 4

14. When 17 is divided by 4, the remainder is the same as when 82 is divided by _____.

(A) 10
(B) 9
(C) 8
(D) 7
(E) 6

15. According to the graph in Figure 5, what is the average number of 911 calls made from Monday through Thursday, inclusive?

911 Emergency Calls

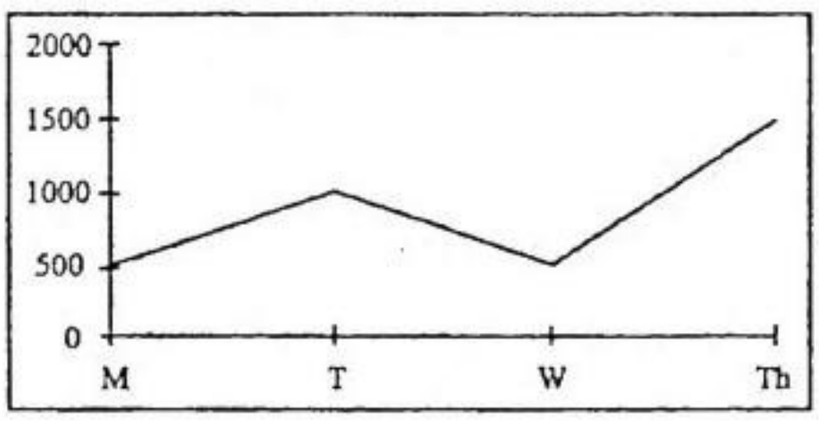


Figure 5

(A) 500
(B) 750
(C) 875
(D) 1,000
(E) 1,125

Questions 16-18 refer to the following definition.

For all real numbers y and z, let $y @ z = y \times z - 2$.

16. $3@9 =$ _____.
(A) 15
(B) 19
(C) 21
(D) 25
(E) 27

17. If $y@3 = 10$, then y must equal _____.
(A) 1
(B) 2
(C) 4
(D) 6
(E) 12

18. If $y = \frac{1}{8}$, for what value of z will $y@z$ equal 0?
(A) -4
(B) 4
(C) 6
(D) 8
(E) 16

19. A class of 35 girls and 24 boys built a haunted house for the Halloween carnival. If $\frac{1}{5}$ of the girls and $\frac{2}{3}$ of the boys participated, what fraction of the total class participated?
(A) $\frac{1}{5}$
(B) $\frac{2}{3}$
(C) $\frac{2}{15}$
(D) $\frac{3}{5}$
(E) $\frac{23}{59}$

20. The ratio of 7 to 4 is equal to the ratio of 35 to what number?
(A) 7
(B) 8
(C) 12
(D) 14
(E) 20

21. Which of the following is a multiple of both 4 and 5?
(A) 10
(B) 45
(C) 50
(D) 60
(E) 90

22. Five less than a number is one third of that number. What is the number?
(A) 12
(B) 4
(C) $\frac{15}{2}$
(D) $\frac{5}{3}$
(E) 6

23. On a test with 50 questions, Mark scored an 72%. How many questions did Mark answer correctly?

(A) 36
(B) 21
(C) 16
(D) 5
(E) 4

24. $\frac{1}{5} + \frac{2}{7} + \frac{3}{4} - \frac{1}{5} - \frac{1}{7} + \frac{1}{4} - \frac{1}{7} =$ _____.

(A) $\frac{1}{2}$
(B) $\frac{2}{3}$
(C) 1
(D) 2
(E) $\frac{3}{4}$

25. The perimeter of a square with a side length of 5 is how much less than the perimeter of a rectangle with sides of length 8 and width 6?

(A) 8
(B) 6
(C) 4
(D) 2
(E) 0

GO ON TO THE NEXT SECTION

SECTION 4
READING COMPREHENSION

Time: 35 minutes

40 Questions

Directions: This section contains eight short reading passages. Each passage is followed by several questions based on its content. Answer the questions is following a passage on the basis of what is stated or implied in that passage. You may write in your test booklet.

Passage 1

One day, a thirsty fox fell into a well as she was getting a drink of water. She could not find a way to climb back up. After a short time, a thirsty goat came to the edge of the well, and seeing the fox below him, he asked if the water was safe to drink. Thinking quickly, the fox said the water was pure and delicious and suggested that the goat come down to have a drink. The goat immediately jumped into the well. After he had enough to drink, he asked the fox how he could get back up and out of the well. The fox replied, "I have a plan. Put your front legs against the wall, and hold your horns up. I will climb up your back, onto your horns, and then I will jump out of the well. Once I'm out, I'll help you get out." The goat agreed, and the fox quickly got out of the well. The goat called out to her: "Oh, Ms. Fox, you said you would help me get out of the well." The fox called down to the goat, "Friend, if you had half as many brains as you have hairs on your chin, you would not have jumped into the well without first thinking about how you would get out."

1. The fox told the goat the water was pure and delicious because _____.
   (A) she was afraid the goat would not drink it if she said it was bad
   (B) she was lonely and wanted company
   (C) she had thought of a plan to get out of the well
   (D) she had tasted it and knew that it was good
   (E) she wanted to be kind to the goat
2. The fox's last words suggest that she thinks the goat is _____.
   (A) uncomfortable (B) unintelligent (C) clumsy
   (D) angry (E) amused
3. All of the following describe the fox EXCEPT which word?
   (A) Lying (B) Selfish (C) Inconsiderate
   (D) Clever (E) Helpful

4. The fox gets out of the well by _____.
   (A) using the goat as a ladder
   (B) using a rope
   (C) jumping out
   (D) climbing up the walls
   (E) calling for help until someone comes
5. The best way to state the lesson the fox's last words suggest is _____.
   (A) take advantage of opportunities
   (B) drink before you get too thirsty
   (C) all goats are foolish
   (D) think before you act
   (E) never trust a fox

Passage 2

Some myths are stories told by early civilizations to explain the origins of natural phenomena. The Greek myth that explains the origin of the seasons is about Demeter, the goddess of the harvest. She had a daughter, Persephone, whom she loved very much. Hades, god of the underworld, fell in love with Persephone, and he asked Zeus, the ruler of the gods, to give Persephone to him as his wife. Zeus did not want to offend either Hades or Persephone, so he said he would not agree to the marriage, but neither would he forbid it. Hades, therefore, decided to take the girl without permission. As she was picking flowers in a meadow, he seized her and took her to the underworld. When Demeter found out what happened to Persephone, she became so angry that she caused all plants to stop growing. People were in danger of starving. But Demeter swore that no food would grow until Persephone was returned to her. Zeus, still not wanting to offend Hades, set a condition for Persephone's return. She could go back to her mother if she had not eaten anything while she was in the underworld. Demeter did not know it, but Persephone had eaten several pomegranate seeds in the underworld. When Zeus discovered this, he permitted a compromise. Persephone could spend part of the year with her mother, but because she had eaten the seeds, she must spend part of the year in the underworld. And when Persephone is in the underworld, Demeter is sad, and therefore will not let the crops grow. That is why we have winter, when plants do not grow. When Persephone returns, Demeter is happy, it is spring, and plants begin to grow again.

6. Demeter is the goddess of _____.
   (A) the underworld (B) marriage (C) food plants
   (D) the weather (E) humanity

7. Myths are stories that _____.
   (A) have a religious purpose
   (B) are always about gods and goddesses
   (C) explain the origin of the seasons
   (D) try to explain nature
   (E) tell about mysteries
8. According to the story of Demeter, winter occurs because _____.
   (A) Demeter disliked Hades
   (B) Hades stole Persephone from her mother
   (C) Persephone is unhappy
   (D) Zeus did not give Hades permission to marry Persephone
   (E) Demeter is sad
9. Zeus did not give permission to Hades to marry Persephone because he _____.
   (A) wanted Persephone to be his wife
   (B) disliked him
   (C) was the ruler of all the gods and goddesses
   (D) did not want to upset him
   (E) thought this might make Demeter angry
10. Demeter stopped the growth of crops when _____.
   (A) Persephone was returned to her
   (B) Zeus did not forbid the marriage
   (C) Hades took Persephone to the underworld
   (D) she discovered what Hades had done
   (E) Persephone ate some pomegranate seeds

Passage 3

Whose woods these are I think I know
His house is in the village, though;
He will not see me stopping here
To watch his woods fill up with snow.
My little horse must think it queer
To stop without a farmhouse near
Between the woods and frozen lake
The darkest evening of the year.
He gives his harness bells a shake
To ask if there is some mistake.
The only other sound's the sweep
Of easy wind and downy flake.

The woods are lovely, dark and deep.
But I have promises to keep,
(15) And miles to go before I sleep,
And miles to go before I sleep.

11. The speaker's horse "must think it queer to stop" because _____.
(A) it is too cold
(B) the horse is used to completing its journey
(C) it is late at night
(D) the horse is cold
(E) they have run out of food

12. What is the author's purpose in repeating the last line twice?
(A) To wake the reader.
(B) To show the contrast between the village and the farm.
(C) To add meaning to the word "sleep".
(D) To catch the attention of the horse.
(E) To reinforce the rhyme.

13. The woods seem to have a special meaning for the speaker. Which is most likely?
(A) He is thinking about their owner in the village.
(B) They seem to pull him in.
(C) He is interested in farming.
(D) He wants to build a new house there.
(E) He is interested in buying them.

14. Which literary technique is used to define the relationship between the speaker and the horse?
(A) Exaggeration (B) Irony (C) Contrast
(D) Rhyme (E) Alliteration

15. The best meaning for "downy" in the article is _____.
(A) wind-swept (B) cold (C) soft
(D) clean (E) frozen

Passage 4

Compact discs (CDs), which may he found in over 25 million American homes, not to mention backpacks and automobiles, first entered popular culture in the 1980s. But their history goes back to the 1960s, when an inventor named James Russell decided to create an alternative to his scratched and warped phonograph records—a system that
(5) could record, store, and replay music without ever wearing out.

The result was the compact disc (CD). Made from 1.2 mm of polycarbonate plastic, the disc is coated with a much thinner aluminum layer that is then protected with a film of lacquer. The lacquer layer can he printed with a label. CDs are typically

120 mm in diameter, and can store about 74 minutes of music. There are also discs that can store 80, 90, 99 and 100 minutes of music, but they are not as compatible with various stereos and computers as the 74-minute size.

The information on a standard CD is contained on the polycarbonate layer, as a single spiral track of pits, starting at the inside of the disk and circling its way to the outside. This information is read by shining light from a 780 nm wavelength semiconductor laser through the bottom of the polycarbonate layer. The light from the laser follows the spiral track of pits, and is then reflected off either the pit or the aluminum layer. Because the CD is read through the bottom of the disc, each pit looks like a bump to the laser.

Information is read as the laser moves over the bumps (where no light will be reflected) and the areas that have no bumps, also known as land (where the laser light will be reflected off the aluminum). The changes in reflectivity are interpreted by a part of the compact disc player known as the detector. It is the job of the detector to convert the information collected by the laser into the music that was originally recorded onto the disc. This invention brought 22 patents to James Russell, who today says he working on an even better system for recording and playing back music.

16. According to the passage, why did James Russell invent the CD?
    (A) He was tired of turning over his records to hear both sides.
    (B) He wanted to record more music on a new format.
    (C) He wanted a purer, more durable sound than he could get from vinyl records.
    (D) He was interested in getting patents.
    (E) He wanted to work with lasers.
17. What would happen if the detector on a CD player malfunctioned?
    (A) The spiral track would not be read properly.
    (B) The pits and land would look like one unit.
    (C) The changes in reflectivity would be absorbed back into the laser.
    (D) The music would play backwards.
    (E) The information read by the laser would not be converted into music.
18. Paragraph 3, explains all of the following EXCEPT _____.
    (A) how the information on a CD is read
    (B) why semiconductor lasers were invented
    (C) where information is stored on a CD
    (D) what pits and bumps are
    (E) the purpose of the aluminum layer of a CD

Passage 5

You know, of course, that in China the Emperor is a Chinaman, and all the people around him are Chinamen too. It happened a good many years ago, but that's just why

it's worthwhile to hear the story, before it is forgotten. The Emperor's palace was the most splendid in the world; entirely and altogether made of porcelain, so costly, but so brittle, so difficult to handle that one had to be terribly careful. In the garden were to be seen the strangest flowers, and to the most splendid of them silver bells were tied, which tinkled so that nobody should pass by without noticing the flowers. Oh, the Emperor's garden had been laid out very smartly, and it extended so far that the gardener himself didn't know where the end was. If you went on and on, you came into the loveliest forest with high trees and deep lakes. The forest went right down to the sea, which was blue and deep; tall ships could sail right in under the branches of the trees; and in the trees lived a nightingale, which sang so sweetly that even the poor fisherman, who had many other things to do, stopped still and listened when he had gone out at night to take up his nets and then heard the nightingale.

—from *The Nightingale* by
Hans Christian Andersen

19. The author wants to tell this story _____.
   (A) because he is a writer and storyteller
   (B) in order to describe the garden
   (C) before it is forgotten
   (D) to teach us about China
   (E) because he can't forget the nightingale
20. The Emperor's palace was made of _____.
   (A) porcelain
   (B) large stones and boulders
   (C) silver bells
   (D) high trees
   (E) brick
21. Silver bells were tied to flowers in the garden to _____.
   (A) remind the gardener not to pick them
   (B) play soft melodies
   (C) frighten birds and mice away
   (D) sparkle in the sun
   (E) draw attention to their beauty
22. The Emperor's garden _____.
   (A) led into a lovely forest
   (B) housed a rare nightingale
   (C) was too large to care for
   (D) was a source of pleasure for all in the kingdom
   (E) was very strange
23. The forest _____.
   (A) contained many rare animals
   (B) housed the nightingale

(C) was a fisherman's hiding place

(D) was an easy place in which to get lost

(E) was dark and threatening

Passage 6

The history of modern pollution problems shows that most have resulted from negligence and ignorance. We have an appalling tendency to interfere with nature before all of the possible consequences of our actions have been studied indepth. We produce and distribute radioactive substances, *synthetic* chemicals, and many other potent compounds before fully comprehending their effects on living organisms. Our education is dangerously incomplete.

It is often argued that the purpose of science is to move into unknown territory, to explore, and to discover. It can be said that similar risks have been taken before, and that these risks are necessary to technological progress.

These arguments overlook an important element. In the past, risks taken in the name of scientific progress were restricted to a small place and a brief period of time. The effects of the processes we now strive to master are neither localized nor brief. Air pollution covers vast urban areas. Ocean pollutants have been discovered in nearly every part of the world. Synthetic chemicals spread over huge stretches of forest and farmland may remain in the soil for decades. Radioactive pollutants will be found in the biosphere for generations. The size and persistence of these problems have grown with the expanding power of modern science.

One might also argue that the hazards of modern pollutants are small compared to the dangers associated with other human activity. No estimate of the actual harm done by smog, fallout, or chemical residues can obscure the reality that the risks are being taken before being fully understood.

The importance of these issues lies in the failure of science to predict and control human intervention into natural processes. The true measure of the danger is represented by the hazards we will encounter if we enter the new age of technology without first evaluating our responsibility to the environment.

24. According to the author, the major cause of pollution is the result of _____.

(A) a lack of understanding of the history of technology

(B) scientists who are too willing to move into unknown territory

(C) changing our environment before understanding the effects of these changes

(D) not passing enough laws

(E) designing synthetic chemicals to kill living organisms

25. The author believes that the risks taken by modern science are greater than those taken by earlier scientific efforts because _____.

(A) science is progressing faster than ever before

(B) the materials used are more dangerous to scientists

(C) the problems are greater

(D) technology has produced more dangerous chemicals

(E) the effects may be felt by more people for a longer period of time

26. The author apparently believes that the problem of finding solutions to pollution depends on _____.

(A) overcoming technical difficulties

(B) the willingness of scientists to understand possible dangers before using new products in the environment

(C) the removal of all potential pollutants from their present uses

(D) a new age of science that will repair the faults of our present technology

(E) the removal of present hazards to the environment

27. The author seems to feel that the attitude of scientists toward pollution has been _____.

(A) nonchalant (B) ignorant (C) concerned

(D) confused (E) naive

28. The word *synthetic* means _____.

(A) man-made (B) progressive (C) unsafe

(D) polluting (E) new

Passage 7

There were moments of waiting. The youth thought of the village street at home before the arrival of the circus parade on a day in the spring. He remembered how he had stood, a small thrillful boy, prepared to follow the band in its faded chariot. He saw the yellow road, the lines of expectant people, and the sober houses. He particularly remembered an old fellow who used to sit upon a cracker box in front of the store and pretend to despise such exhibitions. A thousand details of color and form surged in his mind.

Someone cried, "Here they come!" There was rustling and muttering among the men.

They displayed a feverish desire to have every possible cartridge ready to their hands. The boxes were pulled around into various positions, and adjusted with great care.

The tall soldier, having prepared his rifle, produced a red handkerchief of some kind. He was engaged in knitting it about his throat with exquisite attention to its position, when the cry was repeated up and down the line in a muffled roar of sound.

"Here they come! Here they come!" Gun locks clicked.

Across the smoke-infested fields came a brown swarm of running men who were giving shrill yells. They came on, stooping and swinging their rifles at all angles. A flag, tilted forward, sped near the front.

29. In the first paragraph, the youth is primarily concerned with _____.
    (A) preparing for the upcoming battle
    (B) planning his day at the circus
    (C) watching a soldier tie a handkerchief
    (D) describing a turning point in his life
    (E) reliving a fond childhood memory
30. What is meant by the exclamation "Here they come!" in line 8?
    (A) A group of men selling handkerchiefs is on its way.
    (B) The enemy soldiers are advancing.
    (C) The youth's family is arriving to save him.
    (D) The circus is coming to town.
    (E) A band in a chariot is approaching.
31. The tone of the passage undergoes a change from the first to the second paragraph that can best be described as a movement from _____.
    (A) informality to formality
    (B) anger to amusement
    (C) reminiscence to anticipation
    (D) respect to indifference
    (E) reluctance to fear
32. According to the passage, all of the following are ways the soldiers prepare for battle EXCEPT _____.
    (A) saddling horses
    (B) gathering cartridges
    (C) positioning ammunition
    (D) priming their guns
    (E) tying handkerchiefs
33. Why are the men in the last paragraph carrying a flag?
    (A) It is going to be burned in a public demonstration.
    (B) It is going to be raised in the youth's village.
    (C) It has been damaged and needs to be mended.
    (D) It needs to be protected from gunfire.
    (E) It represents the side they are fighting for.

Passage 8

The cowboy of the American West is an enduring icon in popular culture, but Hawaiian cowboys predated their American counterparts by several decades. In 1792, King Kamehameha the Great of Hawaii received gifts of beef cattle, goats, sheep, and horses, from Captain George Vancouver. The introduction of these unfamiliar animals caused unrest among the native islanders, because the unruly animals often trampled the crops in their fields. Initially, the king protected his imports from wrathful Hawaiians under kapu laws. But in 1830, Kamehameha Ⅲ decided to hire a few Spanish vaqueros from California to keep the animals under control. Soon the Hawaiians were riding, roping, and lassoing alongside the Spanish cowboys.

34. It can be inferred from the passage that the American cowboy _____.
(A) emerged in the West later than his counterpart in Hawaii
(B) was not able to lasso as weft as the Hawaiian cowboy
(C) taught the Hawaiians how to ride and lasso
(D) accompanied the shipment of horses and cattle to Hawaii
(E) did not understand the Hawaiians' opposition to horses

35. According to the passage, all of the following are true about horses and cattle EXCEPT _____.
(A) they were destructive to Hawaiian property
(B) they were found to be too expensive to import
(C) they were unfamiliar to Hawaiians before 1792
(D) they were introduced to Hawaii in the 18th century
(E) they were protected by Hawaiian law

36. According to the passage, the Hawaiian cowboys _____.
Ⅰ. were taught to ride by the Spanish vaqueros
Ⅱ. existed earlier than the American cowboys
Ⅲ. proved better at roping and lassoing than their American counterparts
(A) Ⅰ only
(B) Ⅱ only
(C) Ⅰ and Ⅱ only
(D) Ⅱ and Ⅲ only
(E) Ⅰ, Ⅱ and Ⅲ

37. This passage is primarily about _____.
(A) the Spanish relationship with Hawaii
(B) the history of horses in Hawaii
(C) the introduction of cowboys to Hawaii
(D) the roping of cattle
(E) the history of King Kamehameha

38. The attitude of the writer toward the subject is _____.
(A) neutral (B) confused (C) elated
(D) biased (E) condescending

39. As it is used in line 6, "wrathful" most nearly means _____.

(A) vengeful (B) accommodating (C) confused

(D) tolerant (E) enraged

40. Which of the following questions is NOT answered by the passage?

(A) What effect did the vaqueros have on the animals?

(B) What can be implied about the author's attitude toward the cowboys?

(C) For how many years did the animals cause unrest in Hawaii?

(D) How did the king use kapu laws in Hawaii to protect animals?

(E) How did Hawaiians view Capt. George Vancouver's gifts?

GO ON TO THE NEXT SECTION

SECTION 5
MATHEMATICS ACHIEVEMENT

Time: 40 minutes

25 Questions

Directions: Each question is followed by four suggested answers. Read each question and then decide which one of the four suggested answers is best.

Find the row of spaces on your answer document that has the same number as the question. In this row, mark the space having the same letter as the answer you have chosen. You may write in your test booklet.

Example

$(5 + 3) - 2 =$

(A) 6

(B) 8

(C) 10

(D) 13

Answer

(A) (B) (C) (D)

The correct answer to this question is lettered A, so space A is marked.

1. The polygon in Figure 1 has a perimeter of 35. If each side of the polygon has the same length, what is the length of one side?

(A) 3

(B) 4

(C) 5

(D) 6

(E) 7

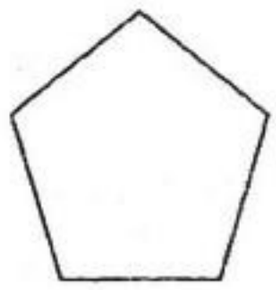


Figure 1

2. Mr. Stuart sold peppermint candy to 18 customers and caramel candy to 33 customers. If 4 of these customers bought both types of candy, how many bought only caramel candy?

(A) 29

(B) 25

(C) 21

(D) 17

(E) 13

3. In a bag of 36 balloons, there is an equal number of balloons of each color. Which of the following CANNOT be the number of different colors in the bag?

(A) 2

(B) 3

(C) 4

(D) 5

(E) 6

4. Which of the following is a whole number less than 14 and also a whole number between 12 and 18?

(A) 11

(B) 12

(C) 12.5

(D) 13

(E) 14

5. According to the graph in Figure 2, Susan spent about how many hours watching Soap Operas?

HOW SUSAN SPENT 12 HOURS WATCHING TV

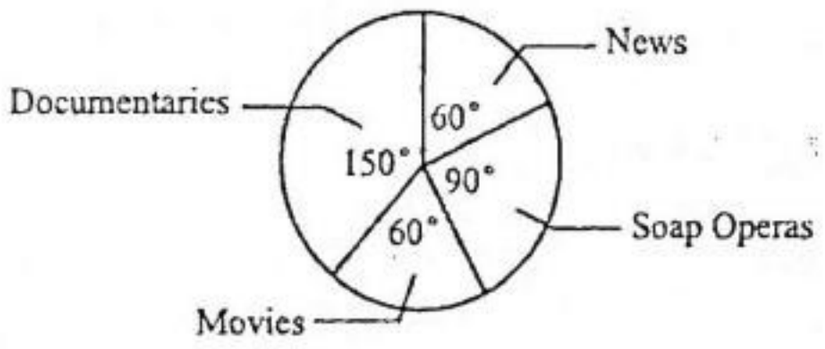


Figure 2

(A) 2
(B) 3
(C) 4
(D) 6
(E) 9

6. If $\frac{1}{3}R = 12$, then $\frac{3}{4}R =$ _____.

(A) 27
(B) 20
(C) 16
(D) 12
(E) 8

7. Which of the following is closest to $\frac{1}{4}$ of 49?

(A) 0.26×50
(B) 0.41×50
(C) 0.26×40
(D) 0.41×40
(E) 41×40

8. According to the graph in Figure 3, the average sales of Company *M* from 1993 to 1997 was _____.

SALES OF COMPANY M:1993-1997

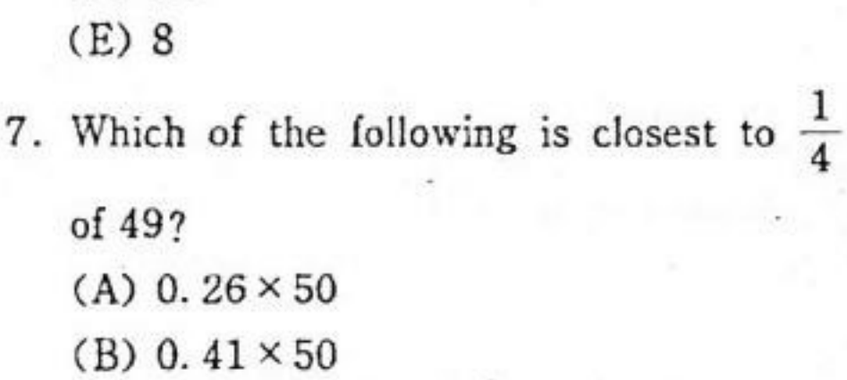


Figure 3

(A) $250,000
(B) $260,000
(C) $265,000
(D) $270,000
(E) $275,000

Questions 9-10 refer to the following definition.

For all real numbers u and v, $u \varnothing v = u - \left(1 - \frac{1}{v}\right)$. [Example: $3 \varnothing 2 = 3 - \left(1 - \frac{1}{2}\right) = 3 - \frac{1}{2} = 2\frac{1}{2}$.]

9. Which of the following is equal to $4 \varnothing 5$?

(A) 0
(B) 1
(C) $3\frac{1}{5}$
(D) $3\frac{4}{5}$
(E) 20

10. If $a \varnothing 3 = 2\frac{1}{3}$, then $a =$ _____.

(A) $\frac{2}{3}$
(B) 3
(C) 4
(D) $4\frac{2}{3}$
(E) 5

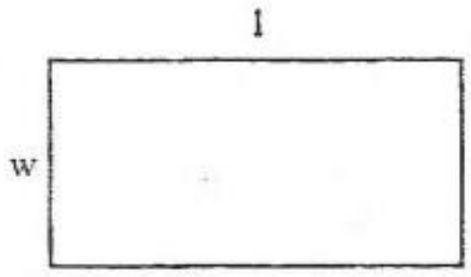
11. In one and a half days a point on the earth's surface rotates through an angle of approximately _____.

(A) 90°
(B) 180°
(C) 360°
(D) 540°
(E) 720°

12. Which of the following groups is arranged in order from smallest to largest?

(A) $\frac{3}{7}, \frac{11}{23}, \frac{15}{32}, \frac{1}{2}, \frac{9}{16}$
(B) $\frac{3}{7}, \frac{15}{32}, \frac{11}{23}, \frac{1}{2}, \frac{9}{16}$
(C) $\frac{11}{23}, \frac{3}{7}, \frac{15}{32}, \frac{1}{2}, \frac{9}{16}$
(D) $\frac{15}{32}, \frac{1}{2}, \frac{3}{7}, \frac{11}{23}, \frac{9}{16}$
(E) $\frac{1}{2}, \frac{5}{32}, \frac{3}{7}, \frac{11}{23}, \frac{9}{16}$

13. The rectangle below has a length three times as long as its width. If its width is x, its perimeter is _____.



(A) 6

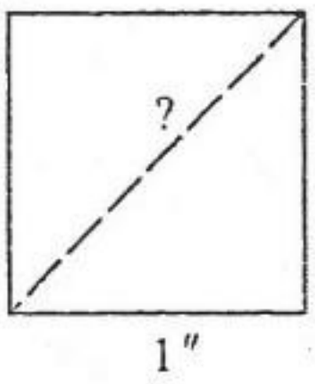
(B) $2x^2$

(C) $4x$

(D) $6x$

(E) $8x$

14. This square has a side of 1″. The diagonal distance from one corner to another is _____.



(A) 1 inch

(B) $\sqrt{2}$ inches

(C) $\sqrt{3}$ inches

(D) 2 inches

(E) 3 inches

15. A plumber needs eight sections of pipe, each 3′2″ long. If pipe is sold only by the 10′ section, how many sections must he buy?

(A) 1

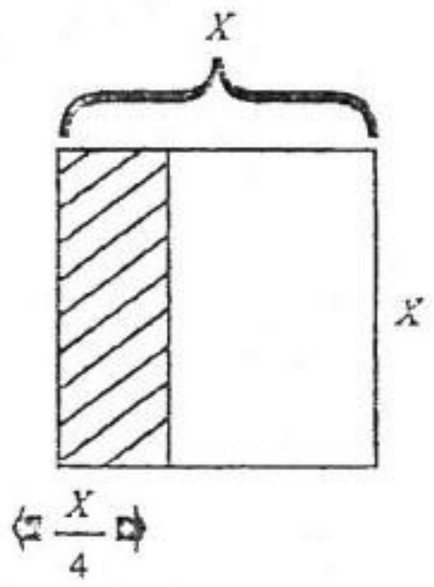
(B) 2

(C) 3

(D) 4

(E) 5

16. The ratio of the area of the shaded part to the unshaded part is _____.



(A) $x:\frac{x}{3}$

(B) 2:1

(C) 1:3

(D) 1:2

(E) 3:1

17. An airplane on a transatlantic flight took 3 hours 40 minutes to get from New York to its destination, a distance of 2,000 miles. To avoid a storm, however, the pilot went off his course, adding a distance of 400 miles to the flight. Approximately how fast did the plane travel?

(A) 655 mph

(B) 710 mph

(C) 738 mph

(D) 750 mph

(E) 772 mph

18. A photograph measuring 7″ wide × 9″ long must be reduced in size to fit a space six inches long in an advertising brochure. How wide must the space be so that the picture remains in proportion?

(A) $1\frac{4}{7}$″

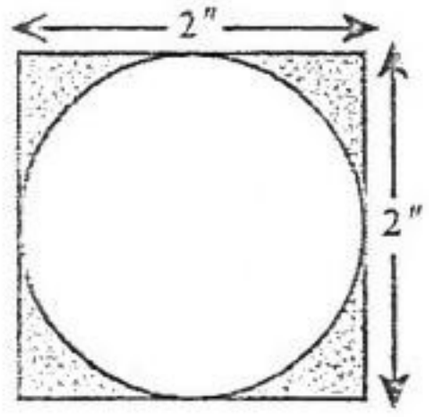
(B) $2\frac{6}{7}$″

(C) $4\frac{2}{3}$″

(D) $5\frac{3}{5}$″

(E) $8\frac{3}{4}$″

19. The total area of the shaded part of the figure is _____.



(A) $\frac{2}{7}$ in.^{2}

(B) $\frac{1}{2}$ in.^{2}

(C) $\frac{6}{7}$ in.^{2}

(D) $1\frac{3}{7}$ in.^{2}

(E) $2\frac{1}{3}$ in.^{2}

20. A certain population of microbes grows according to the formula $P = A \times 2^n$, where P is the final size of the population, A is the initial size of the population, and n is the number of times the population reproduces itself. If each microbe reproduces itself every 3 minutes, how large would a population of only one microbe become after 3 hours?

(A) 16

(B) 64

(C) 128

(D) 1,028

(E) 4,096

21. If $z = y + 4$, what does $4z + 3$ equal?

(A) $y + 7$

(B) $4y + 15$

(C) $4y + 17$

(D) $4y + 19$

(E) It cannot be determined from the information given.

22. If x is greater than 0 but less than 1, and y is greater than x, which of the following is the LEAST?

(A) $\frac{y}{x}$

(B) $\frac{x}{y}$

(C) xy

(D) $\frac{1}{x-y}$

(E) It cannot be determined from the information given.

23. In a restaurant, there are x tables than can each seat 4 people and there are y tables that can each seat 8 people. What is the maximum number of people that may be seated?

(A) $4x + 8y$

(B) $8x + 4y$

(C) $12x + 12y$

(D) $12xy$

(E) $32xy$

24. Mrs. Smith bought 3 square pieces of fabric. A side of the largest piece is 2 times as long as a side of the middle one, and a side of the middle one is 3 times as long as a side of the smallest one. The area of the largest piece is how many times the area of the smallest piece?

(A) 112

(B) 81

(C) 36

(D) 9

(E) 3

25. Mr. Dali's car uses $\frac{3}{4}$ gallons of gas each time he drives to work. If his gas tank holds exactly 9 gallons of gas, how many tanks of gas does he need to make 30 trips to work?

(A) $1\frac{1}{2}$

(B) $2\frac{1}{2}$

(C) 4

(D) 6

(E) 9