4b

The University of the State of New York

REGENTS COMPETENCY TEST

MATHEMATICS

Wednesday, January 26, 1983 — 9:15 a.m.

The questions on this test measure your computational skills, your knowledge of mathematical concepts, and your ability to solve mathematical problems. Your answers to these questions must be recorded on the separate answer sheet. Use only a black lead pencil on your answer sheet.

When you have completed the test, you must sign the declaration which states that you did not see any of the questions or answers before taking this test and that you have neither given nor received help in answering any of the questions during the test. Your answer sheet cannot be accepted if you fail to sign this declaration.

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO.

DIRECTIONS TO STUDENTS

This test has two parts: Part A and Part B. In Part A there are twenty completion questions for which you are to give the answers. In Part B there are forty multiple-choice questions for which you are to choose the correct answer from among the four choices given.

Read the sample question for Part A shown below.

Part A Sample Question

I Add: 435
147
+223

The correct answer is **805**. On the separate answer sheet, in the section titled "PART A," look at the box showing the answer to Sample Question I. Notice how the answer **805** has been written on the line provided. In the same way, write your answer to each of the questions in Part A on the answer line for that question. If you want to change an answer, erase your first answer. Then write the answer you want.

Now look at the sample question for Part B shown below.

Part B Sample Question

II Which number represents forty thousand two hundred?

(a) 4,020
(b) 40,020
(c) 40,200
(d) 42,000

The correct answer is **40,200**, which is next to letter **c**. On the separate answer sheet, in the section titled "PART B," look at the box showing the row of answer circles for Sample Question II. Since letter **c** is the correct answer for Sample Question II, the circle for letter **c** has been filled in. For each question in Part B, decide which of the four choices given is the correct answer. Then, on the answer sheet, in the row of circles for that question, fill in the circle that has the same letter as the answer you have chosen. Mark only one answer for each question. If you want to change an answer, be sure to erase your first mark completely. Then mark the answer you want.

When you are told to start working, turn the page and begin with question 1. Work carefully and answer all the questions. Your score will be the number of questions you answer correctly. You may use scrap paper and the blank spaces of this test booklet to work out the answers to the questions, but be sure to mark all your answers on the separate answer sheet.

Part A

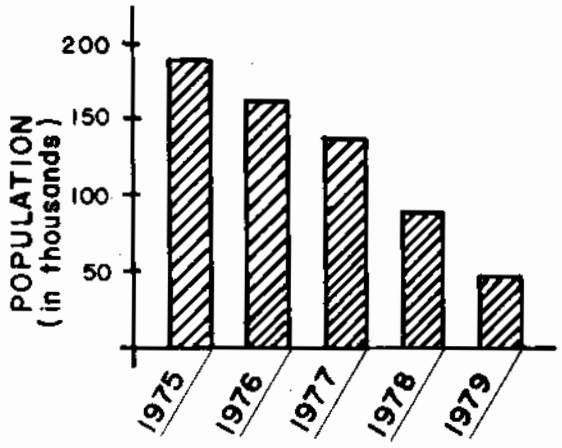
Answer all 20 questions in this part. Write your answers on the lines provided in PART A on the separate answer sheet. Use only a black lead pencil on the answer sheet.

1 Add:
$$\begin{array}{r} 2{,}892 \\ 65 \\ +\ 428 \\ \hline \end{array}$$

2 Subtract 419 from 9,832.

3 Write the numeral for four thousand seven hundred sixty.

4 The bar graph below shows the population of a city from 1975 to 1979. In which year was the population of the city between 100,000 and 150,000?



5 Multiply:
$$\begin{array}{r} 325 \\ \times 34 \\ \hline \end{array}$$

6 Subtract:
$$\begin{array}{r} 34.56 \\ 2.95 \\ \hline \end{array}$$

7 Add: $13.45 + 2.3$

8 Divide: $11\overline{)59.4}$

9 Multiply:
$$\begin{array}{r} 3.03 \\ \times 1.2 \\ \hline \end{array}$$

10 Multiply: $\frac{2}{3} \times \frac{4}{7}$

11 What is 10% of 350?

12 Divide: $45\overline{)2{,}925}$

13 What is the sum of -6 and -3?

14 Solve for x: $3x + 2 = 23$

15 Multiply -4 by 7.

16 During one week, the temperatures in degrees Celsius were 0°, 2°, 5°, 14°, 10°, 1°, and 3°. What was the mean (average) of the temperatures in degrees Celsius?

17 Divide: $\frac{3}{4} \div \frac{1}{5}$

18 What is $\frac{3}{5}$ of 20?

19 Ms. Rivera wants to buy as many ice cream cones as possible with \$10. If each cone costs \$.55, what is the greatest number of cones she can buy?

20 What is the mode of the following group of numbers?
10, 12, 13, 14, 14, 29

Part B

Answer all 40 questions in this part. Mark your answers in the rows of answer circles provided in PART B on the separate answer sheet. Use only a black lead pencil on the answer sheet.

21 If 3 pairs of socks cost \$3.75, what is the cost of 1 pair?

(a) \$1.00
(b) \$1.20
(c) \$1.25
(d) \$1.30

22 Which is equal to $\frac{17}{3}$?

(a) $5\frac{1}{3}$
(b) $5\frac{2}{3}$
(c) $6\frac{1}{3}$
(d) 14

23 On a map, 1 centimeter represents 20 kilometers. How many kilometers are represented by 5 centimeters?

(a) 100
(b) 20
(c) 5
(d) 4

24 In the picture graph below, one house represents 1,000 homes. What is the total number of homes represented?

(a) 6,000
(b) 6,005
(c) 6,050
(d) 6,500

25 Greg spent \$16.72 for groceries. If he gave the clerk a \$20 bill, how much change should he have received?

(a) \$3.28
(b) \$3.38
(c) \$4.28
(d) \$4.72

26 A trip from Marilyn's house to Wendy's house takes $3\frac{1}{2}$ hours. If Marilyn leaves her house at 2:15 p.m., what time will she arrive at Wendy's house?

(a) 5:15 p.m.
(b) 5:20 p.m.
(c) 5:30 p.m.
(d) 5:45 p.m.

27 The greatest common factor of 20 and 30 is

(a) 5
(b) 2
(c) 10
(d) 600

28 Laura added $\frac{1}{3}$ cup of water to $\frac{2}{3}$ cup of milk. How many cups of liquid did she have?

(a) 1
(b) $\frac{1}{3}$
(c) $\frac{2}{9}$
(d) $\frac{3}{6}$

29 Caroline had \$447.12 in her savings account. If she made a deposit of \$28.50, what was the new balance in her account?

(a) \$475.62
(b) \$465.62
(c) \$449.97
(d) \$418.62

30 The rates for a long-distance phone call are:

\$.80 for the first three minutes
\$.25 for each additional minute

What is the cost of a 6-minute long-distance phone call?

(a) \$1.05
(b) \$1.50
(c) \$1.55
(d) \$4.80

31 What is the area of a rectangle whose length is 10 meters and whose width is 9 meters?

(a) 90 m^2
(b) 45 m^2
(c) 38 m^2
(d) 19 m^2

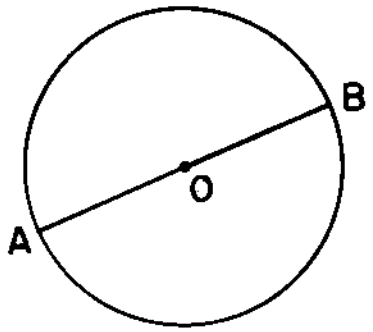
32 What is the value of 3.14×10^2?

(a) .0314
(b) 31.4
(c) 62.8
(d) 314

33 Sally bought a car with \$1,500 as a downpayment and 48 monthly payments of \$125 each. What was the total cost of the car?

(a) \$7,500
(b) \$6,000
(c) \$4,500
(d) \$1,625

34 If O is the center of the circle below, what is the line segment $\overline{AB}$?



(a) an arc
(b) a circumference
(c) a radius
(d) a diameter

35 Expressed as a percent, the fraction $\frac{7}{10}$ is

(a) 7%
(b) 17%
(c) 30%
(d) 70%

36 What is 2.7362 rounded to the nearest hundredth?

(a) 2.74
(b) 2.736
(c) 2.73
(d) 2.7

37 Which value of x will make the following statement true?

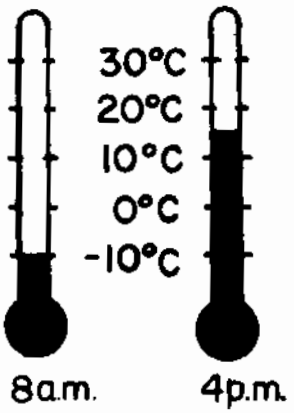
$$\frac{4}{5} = \frac{x}{100}$$

(a) 100
(b) 80
(c) 20
(d) 4

38 A record album sells for \$7.95 plus tax. If the sales tax rate is 7%, the amount of tax on the album is

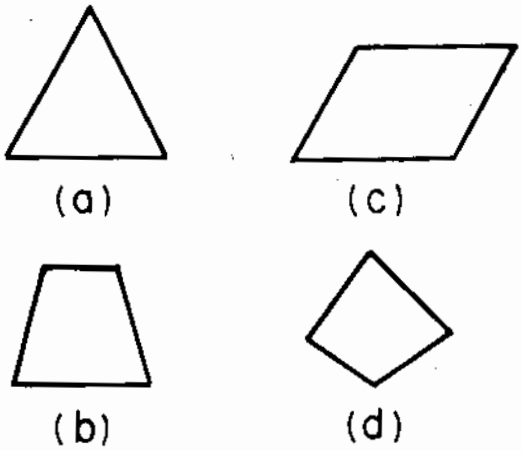
(a) \$.07
(b) \$.56
(c) \$.70
(d) \$.80

39 The diagram below shows thermometers at 8 a.m. and at 4 p.m. one day. How many degrees did the temperature increase from 8 a.m. to 4 p.m.?

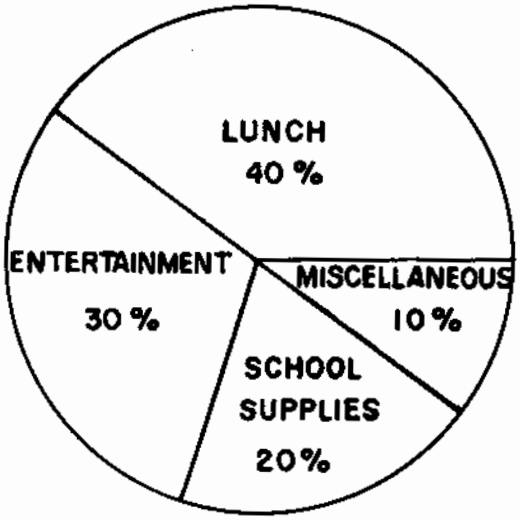


(a) 5°
(b) 10°
(c) 15°
(d) 25°

40 Which figure is a parallelogram?



41 The circle graph below shows how Marcia spends her allowance each week. If she receives a \$4 allowance, how much money does she spend each week for school supplies?



(a) \$1.60
(b) \$1.20
(c) \$.80
(d) \$.20

42 The annual premium for insurance is \$3.19 per \$1,000 of insurance. What is the annual premium for \$50,000 of insurance?

(a) \$319.00
(b) \$159.50
(c) \$31.90
(d) \$15.95

43 Add: $\frac{1}{4} + \frac{1}{8}$

(a) $\frac{3}{8}$
(b) $\frac{1}{4}$
(c) $\frac{2}{12}$
(d) $\frac{1}{12}$

44 A bag contains 4 red chips, 1 blue chip, and 3 black chips. If one chip is drawn at random from the bag, what is the probability that a black chip is drawn?

(a) $\frac{1}{3}$ (c) 3

(b) $\frac{1}{8}$ (d) $\frac{3}{8}$

45 Which measure is equal to 4 meters?

(a) 40 centimeters
(b) 400 centimeters
(c) 400 decimeters
(d) 4,000 kilometers

46 Sam earns \$8.50 per hour. If he works for 6 hours, how much money will he earn?

(a) \$85.00 (c) \$48.00
(b) \$51.00 (d) \$14.50

47 Which is equal in value to \$12.50?

(a) $12\frac{1}{2}$ cents (c) 1,250 cents

(b) 125 cents (d) 12,500 cents

48 Marge correctly answered 18 out of 20 questions on a test. What percent of the questions did she answer correctly?

(a) 18% (c) 82%
(b) 80% (d) 90%

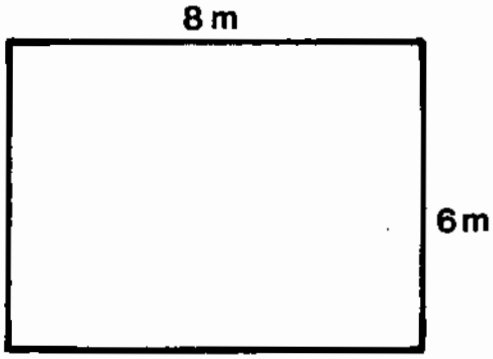
49 A dress is regularly priced at \$80. During a sale, it was sold at 25% off the regular price. What was the sale price of the dress?

(a) \$20 (c) \$55
(b) \$25 (d) \$60

50 Which is the least common denominator of $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{4}{5}$?

(a) 30 (c) 15
(b) 2 (d) 10

51 What is the perimeter of the rectangle below?



(a) 14 m (c) 48 m
(b) 28 m (d) 56 m

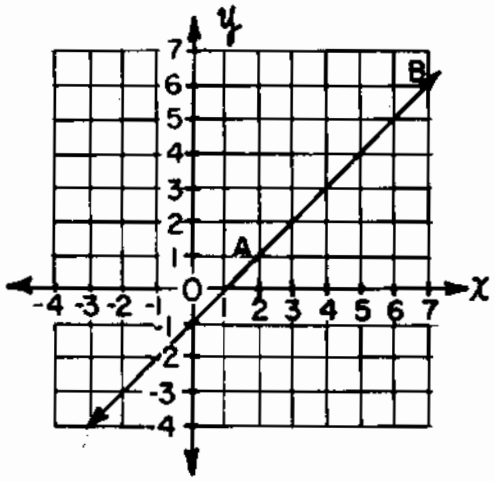
52 All the measures of the angles of triangle ABC are equal. What is the measure of one of the angles?

(a) 60° (c) 120°
(b) 90° (d) 180°

53 Which is the closest approximation of $\sqrt{52}$?

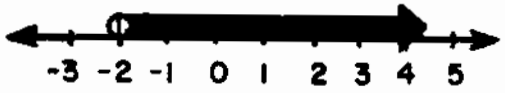
(a) 5 (c) 7
(b) 6 (d) 8

54 Which point does *not* lie on line $\overleftrightarrow{AB}$ in the graph below?



(a) (2,1) (c) (4,2)
(b) (3,2) (d) (5,4)

55 Which statement is represented by the graph below?



(a) $x < -2$ (c) $x > 2$
(b) $x \geq -2$ (d) $x > -2$

56 Which decimal is equal to $\frac{7}{8}$?

(a) .125 (c) 1.13
(b) .875 (d) 7.8

57 The circumference of a circle can be found by using the formula $C = 2\pi r$. What is the circumference of a circle whose radius is 4 meters? (Use $\pi = 3.14$)

(a) 6.28 m (c) 18.84 m
(b) 12.56 m (d) 25.12 m

58 Which decimal has the smallest value?

(a) .07 (c) .40
(b) .31 (d) .5

59 Which is a prime number?

(a) 22 (c) 25
(b) 23 (d) 27

60 Using the formula $c^2 = a^2 + b^2$, what is the value of c when $a = 8$ and $b = 6$?

(a) 7 (c) 14
(b) 10 (d) 28