The University of the State of New York

REGENTS COMPETENCY TEST

MATHEMATICS

Wednesday, January 27, 1993 — 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.

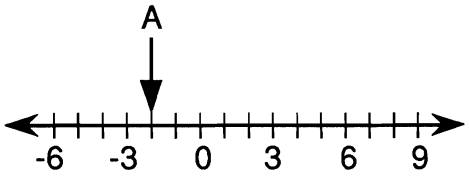
Part A

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 Reduce $\frac{6}{8}$ to lowest terms.

2 Add:
$$\begin{array}{r} 1829 \\ 127 \\ 618 \\ +\ \ 54 \\ \hline \end{array}$$

3 What number is represented at A on the number line below?



4 José has \$20.00. What is the greatest number of blank cassette tapes he can buy if each tape costs \$3.00?

5 If $n = 25$, what is the value of $\sqrt{n}$?

6 Add: $53.038 + 0.12 + 3.47$

7 Round 9,824 to the nearest hundred.

8 Solve for x: $5x + 3 = 33$

9 Multiply: 7.29×0.3

10 If a car averages 20 miles per gallon of gasoline, how many miles will it travel on 16 gallons of gasoline?

11 Divide: $0.3\overline{)186.9}$

12 Write 9% as a decimal.

13 Coretta spends $2\frac{1}{2}$ hours each day practicing piano. What is the total number of hours she practices in 6 days?

14 A square has a perimeter of 40. What is the length of each side of this square?

15 In the number 58.132, which digit is in the hundredths position?

16 What is the sum of −46 and +20?

17 Divide: $8 \div (-2)$

18 Express $\frac{7}{25}$ as a decimal.

19 What is the product of 206 and 13?

20 Compute: $14 - 3.72$

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 Isabelle earns \$4.20 an hour, how much will she earn in 8 hours?

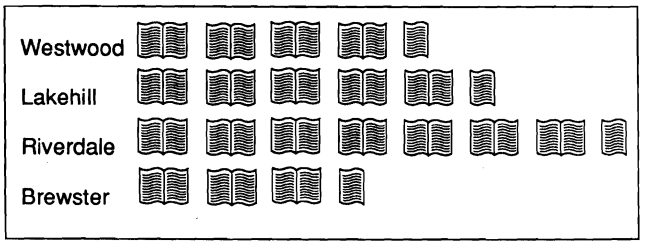
(1) \$0.54
(2) \$12.20
(3) \$33.60
(4) \$336.00

22 Which number has the greatest value?

(1) six million
(2) fifty thousand
(3) seven hundred thousand
(4) one billion

23 Each 📖 below represents 100 magazine subscriptions sold by each school in a school district.

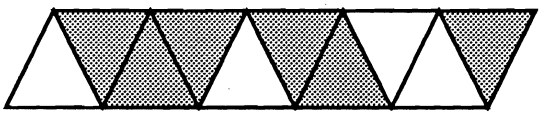
Subscriptions Sold



At which school did the students sell a total of 550 subscriptions?

(1) Westwood
(2) Lakehill
(3) Riverdale
(4) Brewster

24 What percent of the figure below is shaded?



(1) 60%
(2) 20%
(3) 30%
(4) 40%

25 What is the difference between 10,000 and 379?

(1) 9,371
(2) 9,620
(3) 9,621
(4) 9,721

26 Which is *not* a factor of 60?

(1) 8
(2) 2
(3) 3
(4) 15

27 The diameter of a circle is 8 centimeters. Using the formula $C = \pi d$, find the circumference of this circle. (Use $\pi = 3.14$)

(1) 25.12 cm
(2) 50.24 cm
(3) 251.2 cm
(4) 2512 cm

28 Solve for x: $\frac{x}{56} = \frac{5}{8}$

(1) 280
(2) 175
(3) 89.6
(4) 35

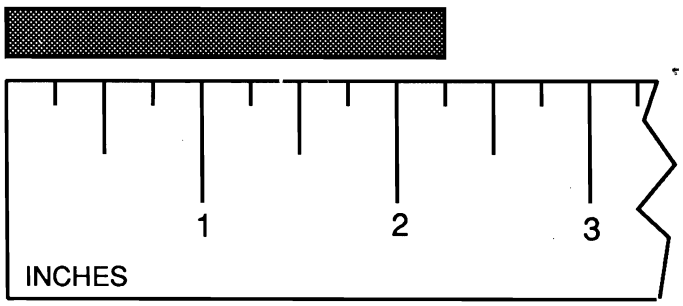
29 What is the least common multiple (LCM) of 2, 3, and 4?

(1) 6
(2) 2
(3) 12
(4) 24

30 Marty is going to add $5\frac{3}{4}$ and $2\frac{1}{12}$. Which number should he use as a common denominator?

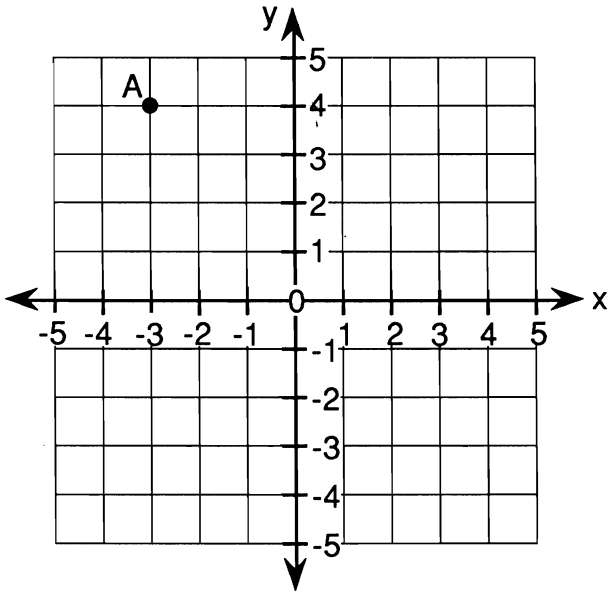
(1) 12
(2) 8
(3) 6
(4) 4

31 What is the length of the bar shown below?



(1) $2\frac{1}{2}$ inches
(2) 2 inches
(3) $2\frac{1}{4}$ inches
(4) $2\frac{1}{16}$ inches

32 On the graph below, what are the coordinates of point A?



(1) (–3,4)
(2) (–3,–4)
(3) (3,4)
(4) (–4,–3)

33 Bianca has a balance of \$582.17 in her savings account. If she makes deposits of \$127.80 and \$47.39, what is the new total in her account?

(1) \$406.98
(2) \$501.76
(3) \$662.58
(4) \$757.36

34 Hakeem purchased a bicycle that cost \$200. If the rate of sales tax is 8%, how much sales tax did he pay?

(1) \$8
(2) \$16
(3) \$184
(4) \$216

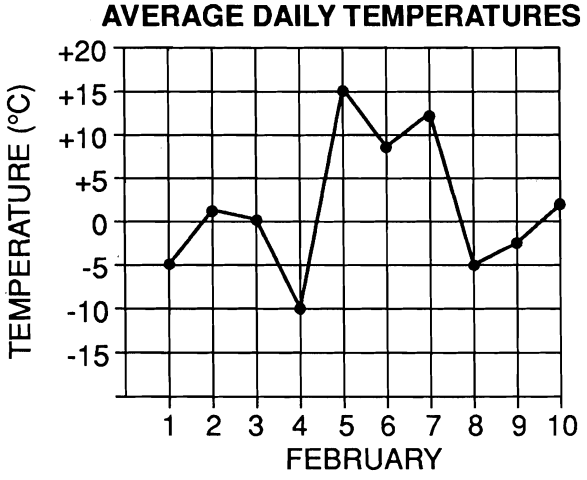
35 Renee has 18 pennies, 5 nickels, 3 dimes, and 14 quarters. How much more money must she save to have exactly $5.00?

(1) $1.00
(2) $0.77
(3) $0.82
(4) $4.60

36 A box contains five blue marbles, two red marbles, and six green marbles. If one marble is chosen at random, what is the probability that it is a blue marble?

(1) $\frac{5}{8}$
(2) $\frac{8}{13}$
(3) $\frac{1}{5}$
(4) $\frac{5}{13}$

37 The graph below shows the average daily temperatures for the first 10 days of February.



According to the graph, the *lowest* average temperature was reached on

(1) February 5
(2) February 10
(3) February 3
(4) February 4

38 What is the approximate length of an unsharpened pencil?

(1) 16 cm
(2) 1.6 mm
(3) 16 m
(4) 1.6 km

39 On a map, 1 centimeter represents 50 kilometers. How many centimeters represent 375 kilometers?

(1) 7.5 cm
(2) 12.5 cm
(3) 37.5 cm
(4) 100 cm

40 Annette buys a computer and agrees to pay $1,000 down and $200 each month for 1 year. What is the total cost of the computer?

(1) $1,200
(2) $2,400
(3) $3,400
(4) $12,200

41 Kip earns $16 each week. He saves $3 of that money. What is the ratio of his savings to his earnings?

(1) $\frac{3}{16}$
(2) $\frac{13}{3}$
(3) $\frac{3}{13}$
(4) $\frac{16}{3}$

42 If $x = 2$ and $y = 3$, what is the value of $x^3 + y$?

(1) 8
(2) 9
(3) 11
(4) 12

43 The table below shows the distribution of scores on a mathematics test.

Scores	Frequency
91 – 100	6
81 – 90	4
71 – 80	7
61 – 70	8
51 – 60	5

How many students scored above 70?

(1) 25
(2) 17
(3) 3
(4) 7

44 Which could *not* be the measure of an angle in a right triangle?

(1) 10°
(2) 40°
(3) 50°
(4) 100°

45 A telephone call costs \$0.20 for the first 3 minutes and \$0.08 for each additional minute. What is the cost of a 9-minute telephone call?

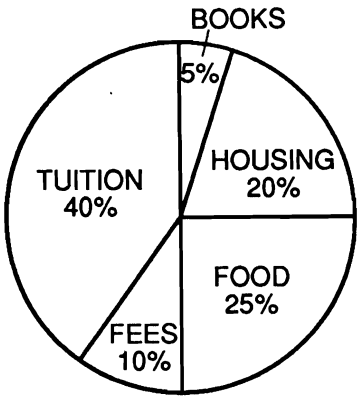
(1) \$0.28
(2) \$0.68
(3) \$0.84
(4) \$0.92

46 Which number is less than –8?

(1) –5
(2) 5
(3) 0
(4) –10

47 The circle graph below represents certain college costs.

YEARLY COLLEGE COSTS



If the total yearly cost for college is \$20,000, how much money is spent on tuition?

(1) \$8,000
(2) \$5,000
(3) \$4,000
(4) \$2,000

48 Marc's grandfather is three times as old as Marc. If Marc's grandfather is 78 years old, which equation could be used to find Marc's age?

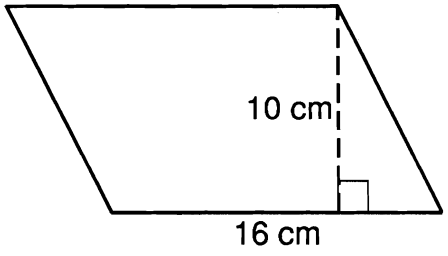
(1) $3 \cdot 78 = n$
(2) $3 + n = 78$
(3) $3n = 78$
(4) $78 - n = 3$

49 What is the mode of the numbers below?

1, 2, 2, 3, 4, 5, 11

(1) 10
(2) 2
(3) 3
(4) 4

50 What is the area of the parallelogram below?



(1) 26 cm^2
(2) 52 cm^2
(3) 80 cm^2
(4) 160 cm^2

51 Which is a prime number?

(1) 27
(2) 28
(3) 29
(4) 30

52 In a class of 28 students, each student will use about 280 sheets of paper during the school year. What is the best estimate of the total number of sheets of paper that will be used by the class?

(1) 600
(2) 4,000
(3) 5,400
(4) 9,000

53 If the cost of 8 apples is \$1.44, what is the cost of 11 apples?

(1) \$1.80
(2) \$1.98
(3) \$15.84
(4) \$19.80

54 Alex took 42 seconds longer than Jean to swim 100 meters. Jean took 1 minute 37 seconds. How long did Alex take?

(1) 55 seconds
(2) 1 minute 5 seconds
(3) 2 minutes 9 seconds
(4) 2 minutes 19 seconds

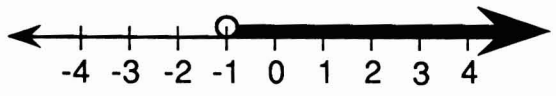
55 Doris worked from 7:30 a.m. to 3:00 p.m. If she was paid \$4.00 per hour, how much money did she earn?

(1) \$27
(2) \$30
(3) \$32
(4) \$34

56 Which set of decimals is ordered from least to greatest?

(1) 0.075, 0.738, 0.75, 0.8
(2) 0.738, 0.75, 0.075, 0.8
(3) 0.75, 0.738, 0.075, 0.8
(4) 0.8, 0.738, 0.75, 0.075

57 Which inequality is represented by the graph below?



(1) $x \geq -1$
(2) $x \leq -1$
(3) $x > -1$
(4) $x < -1$

58 Evaluate: $1 + 6 \times 8$

(1) 48
(2) 49
(3) 54
(4) 56

59 Add:
$$\begin{array}{r} 3\frac{3}{4} \\ +\ 1\frac{2}{3} \\ \hline \end{array}$$

(1) $5\frac{5}{7}$
(2) $5\frac{5}{12}$
(3) $4\frac{5}{7}$
(4) $4\frac{5}{12}$

60 A home video camera costing $1,525.00 is on sale at 20% off. What is the sale price?

(1) $1,220.00
(2) $1,490.00
(3) $1,494.50
(4) $1,505.00