

The University of the State of New York
REGENTS COMPETENCY TEST

MATHEMATICS

Friday, June 18, 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.

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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:
$$\begin{array}{r} 4,897 \\ 201 \\ + 5,326 \\ \hline \end{array}$$

2 Add: $23.8 + 0.26 + 9.1$

3 Write the numeral for thirty-eight thousand sixty-four.

4 A triangle has sides with lengths 6, 9, and 14. Find the perimeter of the triangle.

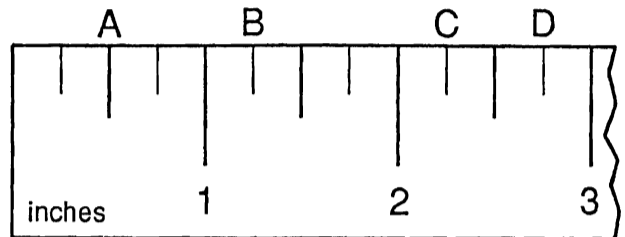
5 Multiply: $8 \times (-12)$

6 Subtract 4637 from 5090.

7 Find the value of 4^3 .

8 Reduce $\frac{24}{32}$ to lowest terms.

9 On the ruler below, which letter indicates $2\frac{1}{4}$ inches?



10 In five basketball games, Becky scored the points listed below:

28, 25, 26, 30, 26

What was the average (mean) number of points she scored for the five games?

11 What is the greatest common factor of 9, 18, and 21?

12 Divide: $0.4 \overline{)1.68}$

13 Divide -25 by -5.

14 What is the mode of the numbers shown below?

5, 8, 12, 7, 5, 3, 1, 0, 5, 7

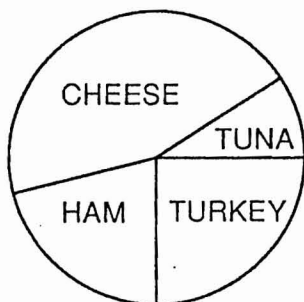
15 Multiply: 63.2×100	18 If one rose costs \$1.50, what is the greatest number of roses that can be purchased with \$20?
16 Solve for x : $3x - 9 = 12$	19 What is the product of $\frac{1}{3}$ and $\frac{2}{7}$?
17 What is the least common denominator of $\frac{2}{3}$, $\frac{1}{4}$, and $\frac{5}{6}$?	20 Add: $\frac{2}{5} + \frac{3}{7}$

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 The circle graph below shows the types of sandwiches Jerry ate for lunch for 1 month.

JERRY'S SANDWICHES



Which type of sandwich did Jerry eat most often?

- (1) ham (3) tuna
 (2) turkey (4) cheese

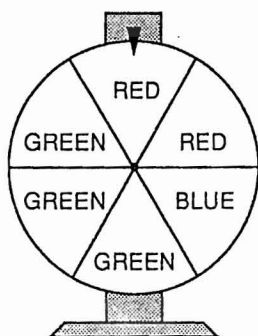
23 Which unit is used to measure the capacity of a container filled with liquid?

- (1) gram (3) liter
 (2) meter (4) inch

24 A bag contains five blue marbles, three red marbles, and two green marbles. A marble is chosen at random from the bag. What is the probability that it is green?

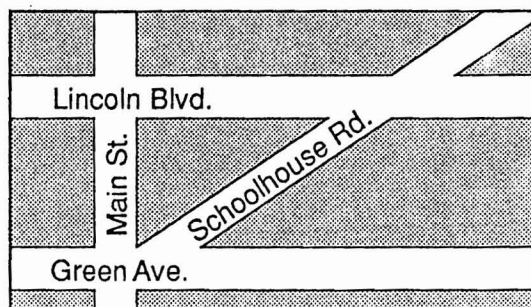
- (1) $\frac{2}{10}$ (3) $\frac{2}{3}$
 (2) 2 (4) $\frac{2}{5}$

22 If the color wheel below is spun once, what is the probability that the blue section will stop at the top of the wheel?



- (1) $\frac{1}{6}$ (3) $\frac{3}{6}$
 (2) $\frac{2}{3}$ (4) $\frac{5}{6}$

25 On the map below, which two streets are parallel?



- (1) Schoolhouse Rd. and Green Ave.
 (2) Main St. and Lincoln Blvd.
 (3) Schoolhouse Rd. and Main St.
 (4) Lincoln Blvd. and Green Ave.

26 Which fraction is equal to 90%?

- (1) $\frac{1}{9}$ (3) $\frac{90}{100}$
(2) $\frac{9}{100}$ (4) $\frac{90}{1}$

27 Cliff earns \$400.00 per week. The following taxes are taken out of his paycheck:

Federal tax:	\$63.37
State tax:	\$22.90
Social Security tax:	\$9.83

What is the amount of Cliff's take-home pay?

- (1) \$96.10 (3) \$309.30
(2) \$303.90 (4) \$496.10

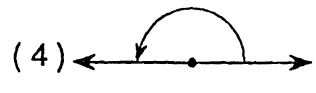
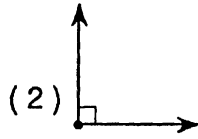
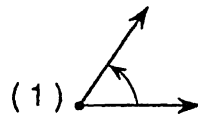
28 Which is a composite number?

- (1) 13 (3) 17
(2) 15 (4) 19

29 Which number is between -1.05 and -1.15?

- (1) -1.27 (3) -1.07
(2) -1.17 (4) -1.04

30 Which diagram represents an obtuse angle?



31 Robyn practiced piano for $\frac{1}{2}$ hour each day for 1 week. What was her total amount of practice time for that week?

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

32 Which number is divisible by 6?

- (1) 16 (3) 63
(2) 26 (4) 96

33 Which number is equivalent to $8\frac{3}{4}$?

- (1) 8.34 (3) 0.875
(2) 8.75 (4) 8.8

34 Solve for x : $\frac{x}{8} = \frac{42}{48}$

- (1) 6
(2) 7
- (3) 252
(4) 336

35 A square root of 64 is

- (1) 32
(2) 16
- (3) 8
(4) 4

36 What is 739.2587 rounded to the nearest thousandth?

- (1) 7000
(2) 739.25
- (3) 739.250
(4) 739.259

37 Which two fractions are equivalent?

- (1) $\frac{2}{3}$ and $\frac{8}{12}$
(2) $\frac{2}{6}$ and $\frac{1}{4}$
- (3) $\frac{5}{7}$ and $\frac{35}{45}$
(4) $\frac{4}{9}$ and $\frac{2}{3}$

38 The rates for a long-distance phone call are listed below.

\$1.20 for the first 3 minutes
\$0.35 for each additional minute

What is the cost of a long-distance call lasting 7 minutes?

- (1) \$1.40
(2) \$1.55
- (3) \$2.60
(4) \$2.80

39 The recipe below shows the ingredients needed to make 4 dozen cookies.

Recipe

16-ounce package cookie mix

2 eggs

$\frac{1}{3}$ cup oil

$1\frac{1}{4}$ cups water

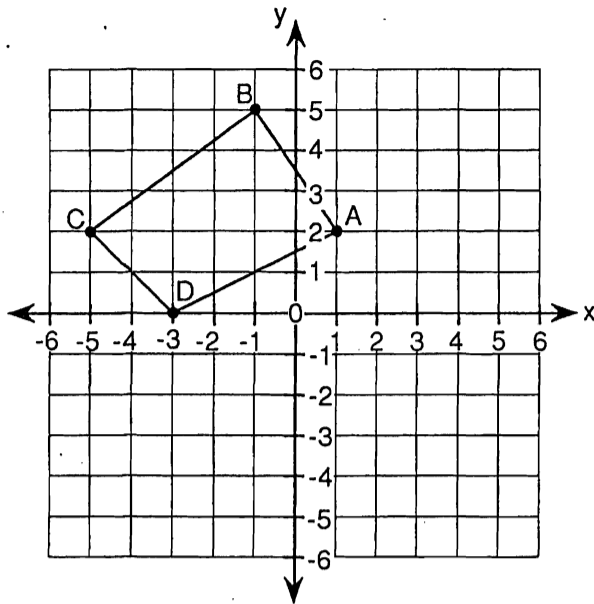
How many eggs would be needed to make 10 dozen cookies?

- (1) 5
(2) 6
- (3) 12
(4) 20

40 Which digit in the number 12.89 is in the hundredths place?

- (1) 1
(2) 2
- (3) 8
(4) 9

- 41 What are the coordinates of point B on the graph below?



- (1) $(-1, 5)$ (3) $(-5, 2)$
 (2) $(5, -1)$ (4) $(-3, 0)$

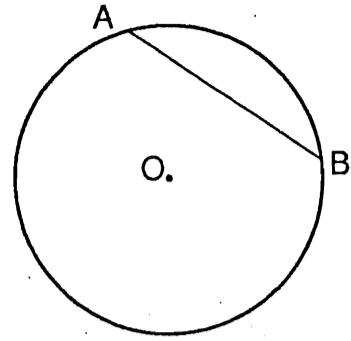
- 42 Irene bought a computer. She made a downpayment of \$66 and paid \$63 a month for 15 months. What was the total amount she paid for the computer?

- (1) \$935 (3) \$1,011
 (2) \$945 (4) \$1,935

- 43 What is 25% of 60?

- (1) 2.4 (3) 240
 (2) 15 (4) 1500

- 44 The diagram below shows a circle with point O as the center.



In the circle, \overline{AB} is a

- (1) radius (3) diameter
 (2) chord (4) circumference

- 45 Find the value of $5x - y^2$ when $x = 3$ and $y = 4$.

- (1) -1 (3) 37
 (2) 7 (4) 45

- 46 The chart below shows some activities and the number of people who did these activities last year.

Activity	Participants (in millions)
Biking	79.4
Fishing	91.0
Picnicking	123.8

According to this chart, how many people went picnicking?

- (1) 123,800 (3) 12,380,000
 (2) 1,238,000 (4) 123,800,000

47 Pat took a hike in the woods. She started her hike at 9:45 a.m. and finished at 2:15 p.m. How long did she hike?

- (1) 12 hours 30 minutes
- (2) 7 hours 30 minutes
- (3) 5 hours 30 minutes
- (4) 4 hours 30 minutes

51 At 2 a.m. the temperature was -10° Fahrenheit. At 12 noon the temperature had risen to 16° Fahrenheit. What was the total increase in temperature?

- (1) 6°
- (2) 10°
- (3) 20°
- (4) 26°

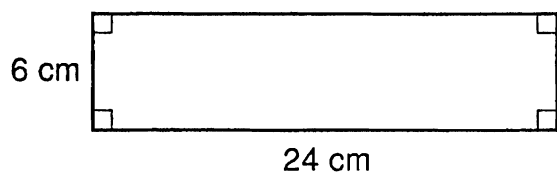
48 Which fraction is greater than $\frac{1}{2}$?

- (1) $\frac{2}{3}$
- (2) $\frac{1}{4}$
- (3) $\frac{4}{10}$
- (4) $\frac{3}{6}$

52 If the sales tax rate is $6\frac{1}{2}\%$, what is the amount of sales tax on a coat costing \$200?

- (1) \$1.30
- (2) \$3.25
- (3) \$12.50
- (4) \$13.00

49 What is the number of square centimeters in the area of the rectangle below?



- (1) 288
- (2) 144
- (3) 60
- (4) 4

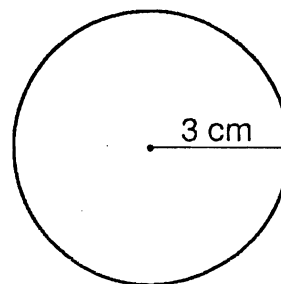
53 A bill for dinner in a restaurant is \$29.98. What is the best estimate of a 15% tip?

- (1) \$.45
- (2) \$4.50
- (3) \$3.00
- (4) \$4.00

50 If four pens of equal value cost a total of \$0.84, which equation would be used to find the cost of one pen?

- (1) $n + 4 = 0.84$
- (2) $0.84n = 4$
- (3) $4n = 0.84$
- (4) $n = 4(0.84)$

54 What is the area, in square centimeters, of the circle below?

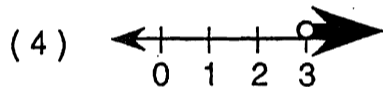
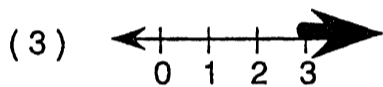
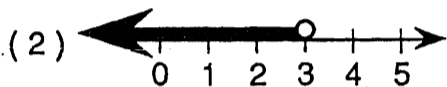
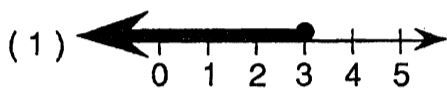


- (1) 9π
- (2) 27π
- (3) 3π
- (4) 6π

55 There are 50 apartments in a new apartment complex. Of these 50 apartments, 15 have air-conditioning. What percent of the apartments have air-conditioning?

- (1) 45% (3) 30%
 (2) $33\frac{1}{3}\%$ (4) 15%

56 Which graph represents $x \leq 3$?



57 Subtract: $2\frac{1}{2}$

$$\underline{1\frac{3}{4}}$$

- (1) $1\frac{3}{4}$ (3) $\frac{3}{4}$
 (2) $1\frac{1}{4}$ (4) $\frac{1}{4}$

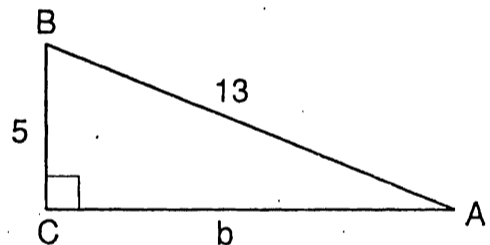
58 Divide: $5\frac{3}{8} \div 1\frac{1}{2}$

- (1) $3\frac{7}{12}$ (3) $5\frac{3}{4}$
 (2) $5\frac{3}{16}$ (4) $128\frac{1}{16}$

59 On a blueprint for a house, $\frac{1}{2}$ inch represents 1 foot. If the length of the bedroom is 12 inches on the blueprint, how long is the actual bedroom in the house?

- (1) 6 feet (3) 12 feet
 (2) 10 feet (4) 24 feet

60 Using the formula $a^2 + b^2 = c^2$, find the value of b in the right triangle below.



- (1) 8 (3) 18
 (2) 12 (4) 144