

The University of the State of New York
REGENTS COMPETENCY TEST

MATHEMATICS

Monday, June 17, 1985 — 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:

$$\begin{array}{r} 7107 \\ 1710 \\ + 771 \\ \hline \end{array}$$

4 Subtract 852 from 9001.

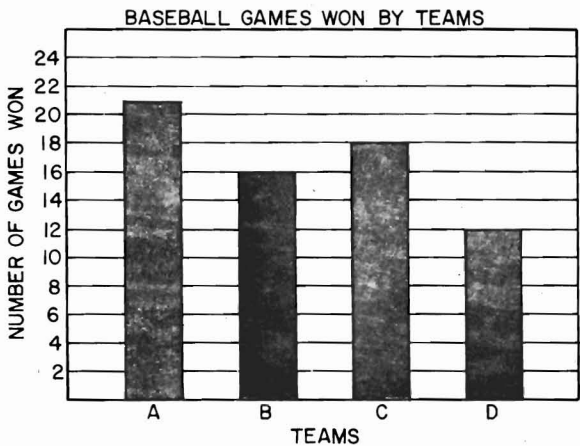
2 Write a numeral for seven thousand eight.

5 Add: $1.07 + 32.3$

6 Subtract:

$$\begin{array}{r} 82.30 \\ 1.94 \\ \hline \end{array}$$

3 The graph below shows the number of baseball games won by four teams during a baseball season. How many more games were won by Team A than Team C?



7 Change $7\frac{2}{5}$ to an improper fraction.

8 Divide: $4\overline{)15.6}$

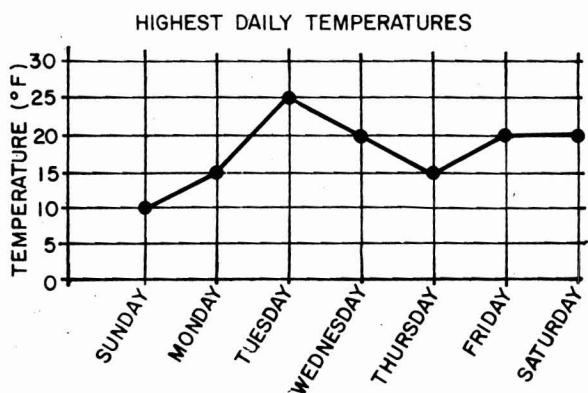
9 Multiply: $\frac{2}{5} \times \frac{3}{7}$

<p>10 Pens are on sale for 35 cents each. Jim has \$2. What is the greatest number of pens he can buy?</p>	<p>16 The circumference of a circle can be found by using the formula $C = \pi d$. How many centimeters are in the circumference of a circle with a diameter of 20 centimeters? (Use $\pi = 3.14$)</p>
<p>11 Divide: $49 \overline{)3969}$</p>	
<p>12 Write 8% as a decimal.</p>	<p>17 Solve for x: $2x + 3 = 11$</p>
<p>13 Multiply: $\begin{array}{r} 738 \\ \times 96 \\ \hline \end{array}$</p>	<p>18 What is $\frac{2}{3}$ of 24?</p>
<p>14 Find the mean (average) of 95, 73, 98, 86, and 73.</p>	<p>19 Write the fraction $\frac{12}{18}$ in lowest terms.</p>
<p>15 Multiply: $\begin{array}{r} 1.35 \\ \times 3.2 \\ \hline \end{array}$</p>	<p>20 Multiply: -9×-7</p>

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 graph below shows the highest temperatures in Buffalo for one week in January. Between which two days was there an increase of exactly 10 degrees?

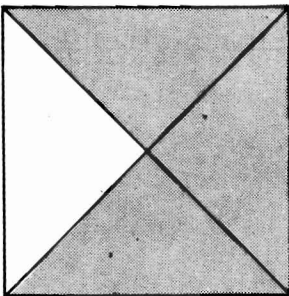


- (a) Monday and Tuesday
(b) Tuesday and Wednesday
(c) Thursday and Friday
(d) Friday and Saturday

- 23 If the price of socks is 3 pairs of socks for \$2.69, what is the price of one pair of socks?

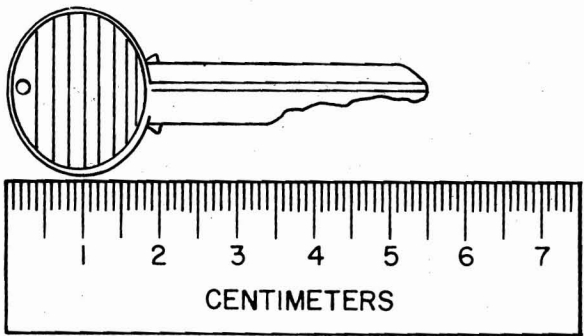
- (a) \$.90 (c) \$2.72
(b) \$2.66 (d) \$8.07

- 24 What percent of the square below is shaded?



- (a) 25% (c) 75%
(b) 50% (d) 90%

- 22 How many centimeters long is the key shown in the drawing below?



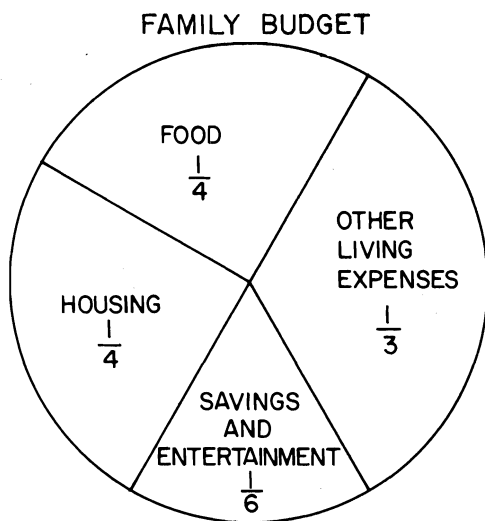
- (a) 5 cm (c) 6 cm
(b) 5.5 cm (d) 55 cm

- 25 Carol paid \$25.98 for a skirt and \$15.00 for a blouse. If she gave the sales clerk fifty dollars, what change should she have received?

- (a) \$8.98 (c) \$10.02
(b) \$9.02 (d) \$10.98

<p>26 What is the greatest common factor of 8 and 12?</p> <p>(a) 8 (c) 12 (b) 2 (d) 4</p>	<p>32 Which is equal to $5\frac{1}{4}$?</p> <p>(a) 5.025 (c) 5.25 (b) 5.14 (d) 5.41</p>
<p>27 What is the value of $25 - (9 - 4)$?</p> <p>(a) 12 (c) 30 (b) 20 (d) 38</p>	<p>33 Donna had a balance of \$243.69 in her checking account. If she made a deposit of \$35.00 and then wrote a check for \$42.50, how much was left in her checking account?</p> <p>(a) \$321.19 (c) \$236.19 (b) \$251.19 (d) \$166.19</p>
<p>28 Maria earns \$3.70 per hour. If she earned \$129.50, how many hours did she work?</p> <p>(a) 30 hours (c) 36 hours (b) 35 hours (d) 40 hours</p>	
<p>29 Solve for x: $\frac{5}{9} = \frac{x}{45}$</p> <p>(a) 5 (c) 25 (b) 9 (d) 225</p>	<p>34 What is 8,649 rounded to the nearest hundred?</p> <p>(a) 8,000 (c) 8,700 (b) 8,600 (d) 9,000</p>
<p>30 If there is a 6% sales tax, what is the amount of tax on a purchase of \$70?</p> <p>(a) \$74.20 (c) \$6.00 (b) \$42.00 (d) \$4.20</p>	<p>35 On a map, 1 centimeter represents 10 kilometers. If the actual distance between two towns is 30 kilometers, how far apart are they on the map?</p> <p>(a) 300 cm (c) 3 cm (b) 30 cm (d) .3 cm</p>
<p>31 What is the value of 4^3?</p> <p>(a) 7 (c) 64 (b) 12 (d) 256</p>	

- 36 The circle graph below shows how a family budgets its annual income. If the annual income of a family is \$24,000, how much is spent for food?



- (a) \$8,000 (c) \$5,000
(b) \$6,000 (d) \$4,000

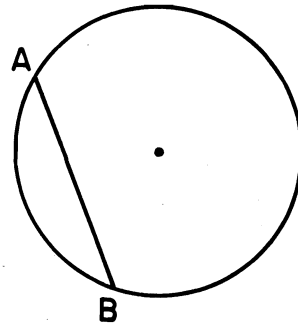
- 37 A bus left Albany at 10:40 a.m. It arrived in New York City 2 hours 50 minutes later. At what time did it arrive?

- (a) 1:30 a.m. (c) 1:50 p.m.
(b) 1:30 p.m. (d) 12:50 p.m.

- 38 What is the least common denominator of the fractions $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{5}$?

- (a) 6 (c) 15
(b) 10 (d) 30

- 39 In the circle below, what is line segment AB ?



- (a) a radius (c) a perimeter
(b) a diameter (d) a chord

- 40 Dennis saves 20% of his allowance each week. If he receives a weekly allowance of \$8.00, how much does he save each week?

- (a) \$.16 (c) \$1.60
(b) \$.20 (d) \$4.00

- 41 Which group of fractions is arranged in order from smallest to largest?

- (a) $\frac{2}{9}$, $\frac{2}{7}$, $\frac{2}{5}$, $\frac{2}{3}$ (c) $\frac{2}{9}$, $\frac{2}{5}$, $\frac{2}{7}$, $\frac{2}{3}$
(b) $\frac{2}{7}$, $\frac{2}{5}$, $\frac{2}{3}$, $\frac{2}{9}$ (d) $\frac{2}{3}$, $\frac{2}{7}$, $\frac{2}{5}$, $\frac{2}{9}$

- 42 When 79.52 is divided by 100, the quotient is

- (a) 0.07952 (c) 7.952
(b) 0.7952 (d) 7952

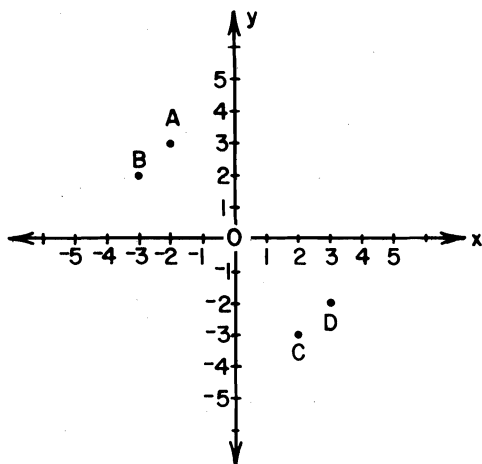
43 Chris bought a computer with \$100 as a downpayment and 16 monthly payments of \$25 each. What was the total cost of the computer?

- (a) \$125 (c) \$400
(b) \$141 (d) \$500

46 During one week, the highest daily temperatures in degrees Fahrenheit were 100°, 97°, 97°, 99°, 98°, 97°, and 98°. What was the mode of the temperatures?

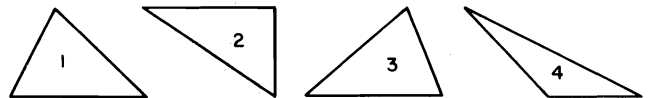
- (a) 97°F (c) 99°F
(b) 98°F (d) 100°F

44 On the graph below, which point has the coordinates $(-3, 2)$?



- (a) A (c) C
(b) B (d) D

47 Which figure best represents an obtuse triangle?



- (a) 1 (c) 3
(b) 2 (d) 4

48 The local school tax is \$123.30 per thousand dollars of assessed value. How much tax must be paid on a property with an assessed value of \$7,000?

- (a) \$863.10 (c) \$7,123.30
(b) \$5,136.90 (d) \$7,863.10

45 Al has five pennies in his pocket. The dates on them are 1980, 1981, 1981, 1982, and 1983. If Al picks one penny without looking, what is the probability that he will choose one dated 1981?

- (a) $\frac{2}{3}$ (c) $\frac{2}{5}$
(b) $\frac{1}{5}$ (d) $\frac{1}{1981}$

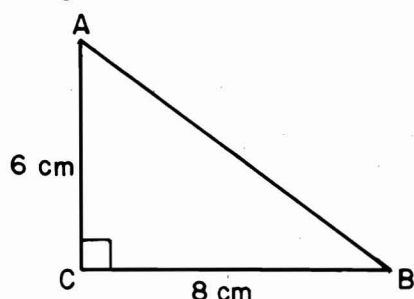
49 A stereo is on sale for 15% off the regular price. If the regular price is \$179, how much can be saved by buying it on sale?

- (a) \$17.90 (c) \$35.80
(b) \$26.85 (d) \$152.15

50 What is 100% of 62?

- (a) 62 (c) 620
(b) 602 (d) 6200

- 51 In the right triangle below,
 $AC = 6$ centimeters and
 $CB = 8$ centimeters. What is the
length of \overline{AB} ?

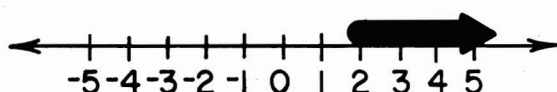


- (a) 6 cm (c) 10 cm
(b) 8 cm (d) 14 cm

- 52 In a triangle, one angle measures
 70° and a second angle measures
 80° . What is the measure of the
third angle of the triangle?

- (a) 30° (c) 60°
(b) 50° (d) 210°

- 53 Which inequality is represented
by the graph below?



- (a) $x \leq 0$ (c) $x \leq 2$
(b) $x \geq 0$ (d) $x \geq 2$

- 54 The length of each side of a
square is 8 centimeters. How
many centimeters are in the
perimeter of the square?

- (a) 8 (c) 32
(b) 16 (d) 64

- 55 A high school softball team won
21 of the 35 games that it played.
What percent of the games did
the team win?

- (a) $16\frac{2}{3}\%$ (c) 37.5%
(b) 21% (d) 60%

- 56 Which is equivalent to 15,000
meters?

- (a) 15 km (c) 1.5 m
(b) 15 mm (d) 1.5 cm

- 57 What is the value of $7 \div 1\frac{1}{4}$?

- (a) $\frac{5}{28}$ (c) $5\frac{3}{5}$
(b) $\frac{4}{35}$ (d) $8\frac{3}{4}$

- 58 Which is a composite number?

- (a) 19 (c) 49
(b) 29 (d) 59

- 59 Which sentence represents the
statement below?

If 6 is subtracted from 21, the
result is greater than 14.

- (a) $6 - 21 > 14$
(b) $6 - 21 < 14$
(c) $21 - 6 < 14$
(d) $21 - 6 > 14$

- 60 The value of 9.9×299.8 is
closest to

- (a) 300 (c) 9,000
(b) 3,000 (d) 30,000