The University of the State of New York

REGENTS COMPETENCY TEST

MATHEMATICS

Monday, June 18, 1984 — 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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11 Divide: 43)1161	16 From $\frac{1}{2}$ subtract $\frac{1}{4}$.
12 Add: -9 + 3	17 Multiply: $(-13) \times (-8)$
13 What is the least common multiple of 2, 3, and 4?	18 What is the mode of the following group of numbers? 40, 45, 90, 45, 40, 40
14 Multiply: $\frac{2}{11} \times \frac{6}{7}$	19 Solve for $x: 4x - 2 = 22$
15 A certain type of bus can hold no more than 50 students. How many of these buses are needed to carry 220 students on a trip?	20 A pizza has 12 slices. If Stanley ate $\frac{3}{4}$ of the slices of the pizza, how many slices did he eat?

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 28 Which is a numeral for thirteen thousandths? (a) 0.013 (c) 0.13 (b) 1.3 (d) 1013 	33 Mary Jo worked 40 hours last week and earned \$3.60 per hour. She had the following deductions taken from her paycheck: \$11.30 for Federal income tax; \$5.20 for State income tax; and \$8.20 for social security. How much money did Mary Jo receive after these
29 What is 25,648 rounded to the nearest thousand?	deductions? (a) \$24.70 (c) \$144.00
(a) 20,000(c) 26,000(b) 25,000(d) 30,000	(b) \$119.30 (d) \$168.70
1	34 A parallelogram has a base of
30 Solve for $x: \frac{4}{9} = \frac{x}{63}$	6 centimeters and a height of 5 centimeters. What is its area?
(a) 7 (c) 36 (b) 28 (d) 252	(a) 30 cm^2 (c) 15 cm^2 (b) 22 cm^2 (d) 11 cm^2
31 Vincent hought a television for	
\$500 with a downpayment of \$80 and a neumant of \$60 each month	35 Which number equals $\sqrt{36}$?
How many months will it take him	(a) 6 (c) 12
to fully pay for the television?	(b) 9 (d) 18
(a) 7 (c) 3 (b) 10 (d) 4	
	36 A doorway is usually about how wide?
32 What is the perimeter of a square whose side measures 16 centimeters?	(a) 1 kilometer(b) 1 meter(c) 1 centimeter
(a) 32 cm (b) 64 cm (c) 128 cm (d) 256 cm	(d) 1 millimeter

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37 Divide: $\frac{2}{5} \div \frac{1}{2}$	41 In circle A below, which word refers to line segment AB?
(a) $\frac{2}{10}$ (c) $\frac{4}{5}$ (b) $\frac{10}{2}$ (d) $\frac{5}{4}$	A
38 A car travels at a rate of 40	(a) diameter (c) chord (b) circumference (d) radius
knometers per nour. What is the total number of kilometers that it will travel in $4\frac{1}{2}$ hours? (a) 90 (c) 162 (b) 160 (d) 180	 42 A farmer bought four chickens for a total of \$9.00 and then sold them for \$3.00 each. What was the farmer's profit? (a) \$6.00 (c) \$3.00 (b) \$9.00 (d) \$12.00
 39 On a map, 1 centimeter represents 30 kilometers. How many centimeters represent 120 kilometers? (a) 3,600 (c) 40 (b) 90 (d) 4 	43 Which is the number 40,000,000 written in scientific notation? (a) 4×10^{7} (c) 10×4^{7} (b) 40×10^{7} (d) 7×4^{10}
	44 Expressed as a fraction in lowest terms $\frac{30}{30}$ is equal to
40 Which has the <i>least</i> value?	$\frac{48}{3} = 1000000000000000000000000000000000000$
$\begin{array}{cccc} (a) & -2 & (c) & -7 \\ (b) & +2 & (d) & +7 \end{array}$	(a) $\frac{5}{6}$ (c) $\frac{15}{24}$
	(b) $\frac{5}{8}$ (d) $\frac{10}{16}$

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 45 Which decimal has the <i>smallest</i> value? (a) 0.5 (c) 0.05 (b) 0.55 (d) 0.005 	 49 The expression (9 × 6) + (9 × 4) is equal to (a) 9 × (6 + 4) (b) (9 + 9) × 10 (c) 18 × (6 × 4) (d) 81 × (6 + 4)
 46 Mr. Endara began work at 8:30 a.m. and finished at 4:00 p.m. How many hours did he work? (a) 4¹/₂ (c) 8¹/₂ (b) 7¹/₂ (d) 12¹/₂ 	 50 What is the tax on a baseball mitt marked \$24.99, if the sales tax rate is 7%? (a) \$17.49 (c) \$1.70 (b) \$1.75 (d) \$1.48
47 Seven cards, each containing one of the letters in the word "ALABAMA," are placed in a box. If one card is chosen at random, what is the probability that the card chosen will be an "A"?	 51 Two angles of a triangle measure 50° and 70°. What is the measure of the third angle of the triangle? (a) 30° (c) 120° (b) 60° (d) 240°
(a) $\frac{1}{7}$ (c) $\frac{4}{7}$ (b) $\frac{1}{4}$ (d) $\frac{3}{7}$	52 Ten is 25% of what number? (a) 2.5 (c) 25 (b) 10 (d) 40
 48 Wanda pays \$1.80 per \$1,000 worth of insurance each year. What is her yearly premium if she has \$25,000 worth of insurance? (a) \$4.50 (c) \$45.00 (b) \$11.25 (d) \$112.50 	 53 Joe is 1.8 meters tall. How many centimeters tall is he? (a) 0.018 cm (b) 18 cm (c) 180 cm (d) 1800 cm

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 $\frac{3}{4} + \frac{2}{3}$ **56** Add: 54 According to the chart below, what is the minimum monthly payment (a) $\frac{5}{7}$ (c) $\frac{5}{12}$ that must be made on a charge account with a balance of \$280.50? (b) $\frac{6}{7}$ (d) $\frac{17}{12}$ Minimum Charge Monthly **Balance** Payment 57 A jacket priced at \$34 is on sale at 20% off. What is the sale price of \$ 11.00 or less Balance the jacket? 11.01-100 \$10 100.01-200 15 (a) \$27.20 (c) \$28.20 200.01-250 20 (d) \$28.80 (b) \$27.80 250.01-300 25 300.01-400 30 400.01-450 35 58 Terry correctly answered 42 out of 450.01-500 40 $\frac{1}{10}$ Balance 60 questions on a test. What over \$500 percent of the questions were answered correctly? (a) \$25.00 (c) \$300.00 (a) 1.43 (c) 25.20 (b) \$250.01 (d) \$305.50 (d) 70 (b) 18 55 In the graph below, what are the 59 A bank offers 12% interest on coordinates of point D? savings accounts that are larger than \$10,000. If Mrs. Lopez opens an account of \$20,000, how much interest will she receive at the end of the year? (a) **\$240** (c) \$2,400 (b) \$1,200 (d) \$24,000 -5 -4 -3 -2 -1 Ż 60 The area of a circle is found by using the formula $A = \pi r^2$. What is the area of a circle whose radius is 6 meters? [Use $\pi = 3.14$] $(a)^{\prime}$ (-3,2) (c) (3, -2)(b) (-2,3)(d) (2, -3)(a) 9.42 m^2 (c) 37.67 m^2 (b) 18.84 m² (d) 113.04 m²

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