

REGENTS COMPETENCY TEST

MATHEMATICS

Tuesday, June 20, 1995 — 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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ALBANY, NEW YORK 12234

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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 Calvin weighed 178 pounds before going on a diet. After the diet, he weighed 167 pounds. How many pounds did he lose?

2 Add: $23.5 + 7.2 + 0.9$

- 3 Reduce $\frac{12}{15}$ to lowest terms.

- 4 Write the numeral for seventeen thousand one hundred seventy-two.

- 5 Each day last week, George sold the numbers of newspapers shown below.

Mon.	Tues.	Wed.	Thurs.	Fri.
47	54	53	47	44

What is the mean (average) of the newspapers that George sold?

- 6 Subtract 7.68 from 12.62.

- 7 The chart below shows the minimum age for obtaining a driver's license and the number of states that require that age.

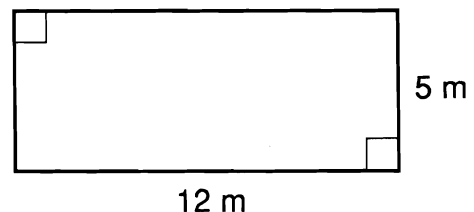
Driver's License Age Requirement

Minimum Age (years)	Number of States Requiring
14	7
15	11
$15\frac{1}{2}$	1
16	29
$16\frac{1}{2}$	1
18	1

What is the total number of states in which a person can obtain a driver's license before the age of 16?

- 8 Which digit is in the hundredths place in the number 60.42?


- 9 What is the total number of meters in the perimeter of the rectangle below?



<p>10 What is the mode of these numbers? 12, 15, 12, 9, 15, 7, 15</p>	<p>16 Divide: $0.6 \overline{)34.86}$</p>
<p>11 Write 25% as a fraction in lowest terms.</p>	<p>17 What is the greatest common factor (GCF) of 12, 18, and 24?</p>
<p>12 What is the sum of 26 and -15?</p>	<p>18 Solve for x: $5(x + 2) = 60$</p>
<p>13 If $y = 3x + 1$, find the value of y when $x = 4$.</p>	<p>19 Divide -36 by -3.</p>
<p>14 Divide: $21 \overline{)8442}$</p>	<p>20 Find the value of $4 + 3 \times 2$.</p>
<p>15 Round 682.36 to the nearest tenth.</p>	

Part B

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

- 21 In the picture graph below, each  represents 100 students who graduated from Happyville High School in 1994.

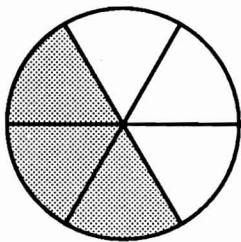
HIGH SCHOOL GRADUATES



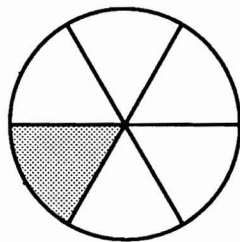
How many students graduated in 1994?

- (1) 500 (3) 600
(2) 550 (4) 650

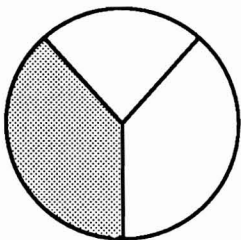
- 22 Anita cut a pizza into 6 equal pieces. She ate 1 piece and gave 2 pieces to her friend. Which figure below is shaded to show how much pizza was left?



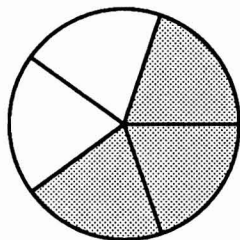
(1)



(3)



(2)



(4)

- 23 Which number is *not* divisible by 5?

- (1) 100 (3) 35
(2) 52 (4) 40

- 24 If three pounds of candy costs \$3.69, how much does one pound of candy cost?

- (1) \$1.23 (3) \$3.69
(2) \$2.46 (4) \$11.07

- 25 On a map, 1 inch represents 10 miles. How many miles are represented by $3\frac{1}{2}$ inches?

- (1) $3\frac{1}{2}$ (3) 35
(2) $30\frac{1}{2}$ (4) 350

- 26 Solve for x : $\frac{x}{6} = \frac{8}{24}$

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

27 The value of 4^3 is

- (1) 12
- (2) 20
- (3) 60
- (4) 64

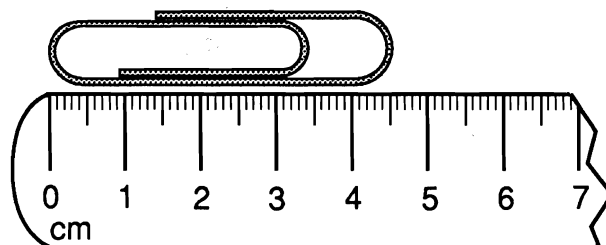
31 Which algebraic expression represents the phrase "twice a number, increased by 5"?

- (1) $2n + 5$
- (2) $5n - 2$
- (3) $2n - 5$
- (4) $5n + 2$

28 A woman drove 318 miles in 6 hours. What was her average speed?

- (1) 55 mph
- (2) 53 mph
- (3) 52 mph
- (4) 51 mph

32 What is the number of centimeters in the length of the paper clip below?



- (1) 3.5
- (2) 4.5
- (3) 5.0
- (4) 4.0

29 Jamal had \$368.42 in his bank account. He made a deposit of \$29.00 and later a withdrawal of \$53.75. What was Jamal's new account balance?

- (1) \$285.67
- (2) \$343.67
- (3) \$397.42
- (4) \$451.17

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

- (1) $\frac{3}{10}, \frac{3}{8}, \frac{3}{6}, \frac{3}{4}$
- (2) $\frac{3}{8}, \frac{3}{6}, \frac{3}{7}, \frac{3}{9}$
- (3) $\frac{3}{8}, \frac{3}{7}, \frac{3}{9}, \frac{3}{6}$
- (4) $\frac{3}{6}, \frac{3}{4}, \frac{3}{8}, \frac{3}{10}$

30 What is $\frac{1}{2}$ written as a percent?

- (1) 5%
- (2) 15%
- (3) 50%
- (4) 500%

34 Which number is a square root of 64?

- (1) 8 (3) 32
(2) 16 (4) 4,096

37 If the sales tax rate is 7%, what is the tax on a skirt priced at \$29.00?

- (1) \$0.07 (3) \$0.70
(2) \$0.20 (4) \$2.03

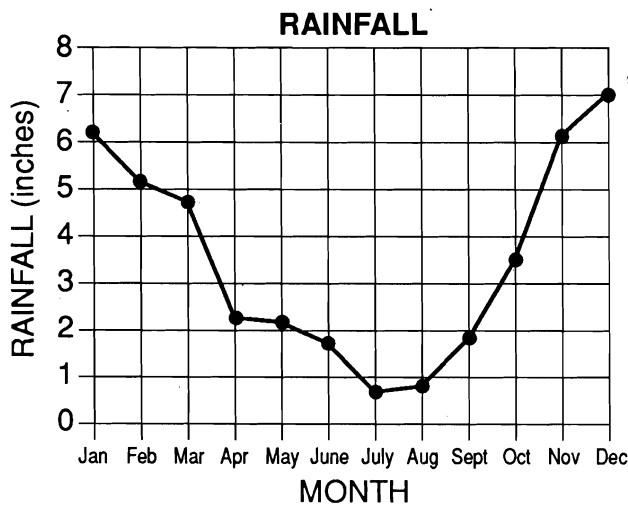
35 Which unit of measurement is best for estimating the length of a wire fence needed to enclose a small backyard?

- (1) millimeters (3) kilometers
(2) liters (4) meters

38 Which expression is true?

- (1) $-8 < 8$ (3) $-8 > 8$
(2) $-8 = 8$ (4) $-8 \geq 8$

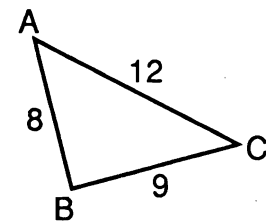
36 The graph below shows the total rainfall each month for a certain city during one year.



During how many months was the rainfall greater than 3 inches?

- (1) 7 (3) 5
(2) 6 (4) 4

39 In triangle ABC below, what is the ratio of AB to AC ?

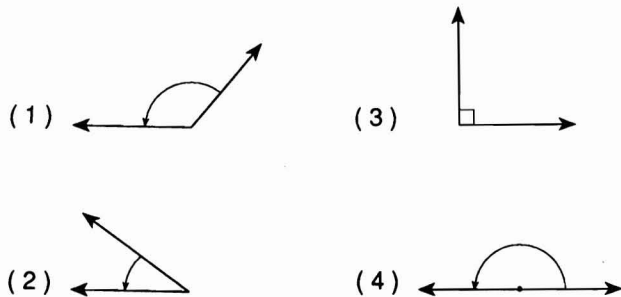


- (1) 8:9 (3) 9:12
(2) 8:12 (4) 12:8

40 Tamesha receives a 5% commission for each computer she sells. When she sells a home computer for \$750, what is her commission?

- (1) \$0.37 (3) \$37.50
(2) \$3.75 (4) \$375.00

41 Which diagram represents an obtuse angle?



45 Which two fractions have a least common denominator (LCD) of 15?

- (1) $\frac{1}{5}$ and $\frac{2}{3}$ (2) $\frac{1}{5}$ and $\frac{3}{10}$ (3) $\frac{1}{2}$ and $\frac{7}{15}$ (4) $\frac{2}{3}$ and $\frac{1}{12}$

42 Gregory purchased 3 pounds of hard salami at \$2.98 per pound. How much change should he receive after giving the clerk a \$20 bill?

- (1) \$1.06 (2) \$6.06 (3) \$11.06 (4) \$12.06

46 The perimeter and the area of a square both equal 16. What is the length of one side of the square?

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

43 Abbey played in 29 basketball games and averaged 21 points per game. Which is the best estimate of Abbey's total points?

- (1) 8 (2) 50 (3) 60 (4) 600

47 The rate for placing an advertisement in a newspaper for 1 week is \$10.00 for the first 20 words, and \$0.60 for each additional word. What is the total cost of a 35-word advertisement for 1 week?

- (1) \$16.60 (2) \$19.00 (3) \$21.00 (4) \$22.00

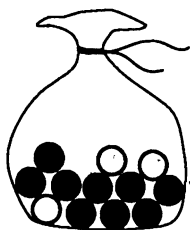
44 Selena is buying a new television. She agrees to pay \$50 down and \$30 per month for one year. What will be the total cost of the television?

- (1) \$80 (2) \$310 (3) \$360 (4) \$410

48 Seventeen hundredths of a group of students are wearing sneakers. Which decimal equals the portion that are wearing sneakers?

- (1) 0.017 (2) 0.17 (3) 1.7 (4) 1700.0

- 49 The bag represented by the diagram below contains the number of white marbles and black marbles shown.



If one marble is picked at random from the bag, what is the probability that it will be black?

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

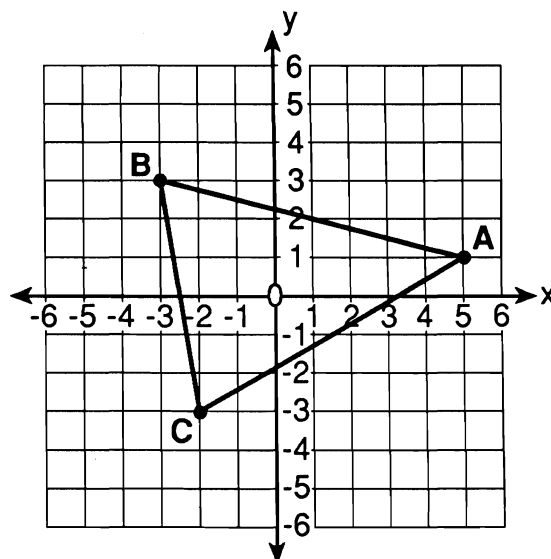
- 50 Part of a train schedule is shown below.

	WEEKDAY SCHEDULE	
Train	Departs Beachville	Arrives Marketville
A	7:15 a.m.	9:15 a.m.
B	8:15 a.m.	10:30 a.m.
C	10:15 a.m.	12:20 p.m.
D	12:15 p.m.	2:10 p.m.

Which train takes the *least* amount of time to travel from Beachville to Marketville?

- (1) A (3) C
 (2) B (4) D

- 51 What are the coordinates of point A of triangle ABC shown on the graph below?



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

- 52 Stephanie earns \$6.50 per hour as a gas station attendant during a 40-hour work week. A total of \$62.25 is withheld from her weekly paycheck for State and Federal income tax, and \$18.50 is deducted for Social Security tax. How much remains as her net pay?

- (1) \$179.25 (3) \$241.50
 (2) \$197.75 (4) \$260.00

53 Juan works $7\frac{1}{2}$ hours each day. How many more hours will he work today if he has already worked $2\frac{1}{4}$ hours?

(1) $9\frac{3}{4}$

(3) 5

(2) $5\frac{1}{4}$

(4) $4\frac{1}{4}$

54 Add: $\frac{2}{5} + \frac{1}{3}$

(1) $\frac{11}{15}$

(3) $\frac{3}{8}$

(2) $\frac{3}{15}$

(4) $\frac{21}{53}$

55 A kilometer is how many times as great as a meter?

(1) 10

(3) 1,000

(2) 100

(4) 1,000,000

56 Which is a prime number?

(1) 15

(3) 27

(2) 19

(4) 39

57 Wayside Airport has 63 flights leaving every week. Two-thirds of these flights leave on weekdays. How many flights leave on weekdays?

(1) 21

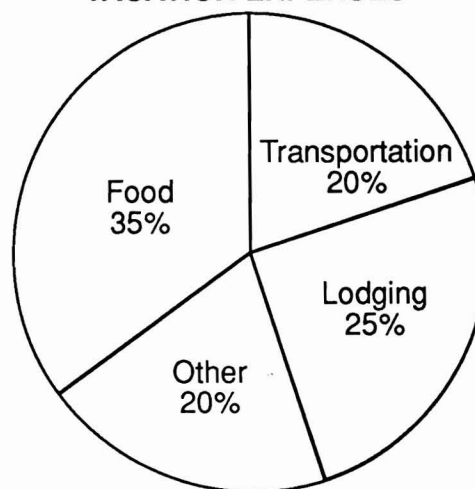
(3) 42

(2) 30

(4) 63

58 The circle graph below shows how the Mendolas spent their money on a family vacation.

VACATION EXPENSES



If they spent a total of \$800 on their vacation, how much did they spend for food?

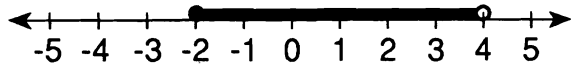
(1) \$240

(3) \$300

(2) \$280

(4) \$350

59 Which inequality is represented by the graph below?



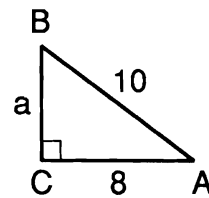
(1) $-2 < x \leq 4$

(3) $-2 \leq x \leq 4$

(2) $-2 < x < 4$

(4) $-2 \leq x < 4$

60 What is the value of a in the right triangle below? (Use the formula $a^2 + b^2 = c^2$)



(1) 6

(3) 18

(2) 2

(4) 36