

REGENTS COMPETENCY TEST

MATHEMATICS

Wednesday, January 24, 2001 — 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 No. 2 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 No. 2 pencil on the answer sheet.

- 1 The circle graph below shows the results of a survey of students' reading choices.


Favorite Type of Book



Which type of book was chosen by the greatest number of students as their favorite?

2 Add:

$$\begin{array}{r} 354 \\ 163 \\ + 67 \\ \hline \end{array}$$

- 3 On a pictograph, each  represents 20 hamburgers. How many of these symbols would represent 120 hamburgers?

- 4 Subtract 98 from 603.

5 Multiply:

$$\begin{array}{r} 305 \\ \times 15 \\ \hline \end{array}$$

- 6 Hyunjoo received these test scores for science:

75, 100, 92, 83, 70

What is the median of her scores?

- 7 Multiply (-7) by 8.

- 8 Kayla arrived at school at 8:15 a.m. and, due to illness, left school at 9:40 a.m. What is the total number of minutes that Kayla was in school?

- 9 Reduce $\frac{20}{100}$ to lowest terms.

10 What is the sum of -4 and $+3$?

15 Divide: $\frac{2}{3} \div \frac{5}{7}$

11 The table below shows the highest and lowest ocean temperatures for 5 months.

Ocean Temperatures ($^{\circ}\text{F}$)

Month	High	Low
June	66	58
July	72	67
August	74	70
September	75	69
October	70	58

During which month did the ocean temperature change least?

16 Compute: $(-8) - (-3)$

17 Write the numeral for eight million four hundred thousand nine.

18 Add: $8\frac{3}{8} + 12\frac{1}{2}$

12 Subtract 3.2 from 5.

19 Solve for x : $4x + 3 = 23$

13 Divide: $14 \overline{)267.54}$

20 Subtract $\frac{1}{8}$ from $\frac{1}{5}$.

14 Add: $29.3 + 5.25 + 8.3 + 2$

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 No. 2 pencil on the answer sheet.

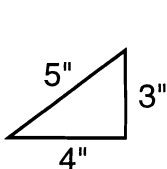
21 If pencils cost \$0.20 each, what is the greatest number that Mark can buy with \$3.00?

- (1) 7 (3) 10
(2) 8 (4) 15

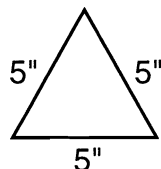
24 A local fast-food restaurant can serve 150 people in an hour. At this rate, how long would it take to serve 600 people?

- (1) 1 hr (3) 3 hr
(2) 2 hr (4) 4 hr

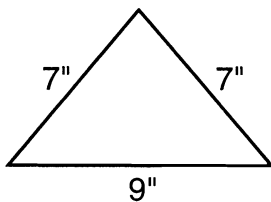
22 Which triangle is equilateral?



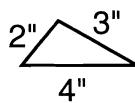
(1)



(3)



(2)



(4)

25 Juan purchased 12 copies of a poster at a gift shop for a total of \$19.08. How much did each poster cost?

- (1) \$1.59 (3) \$1.99
(2) \$1.79 (4) \$7.08

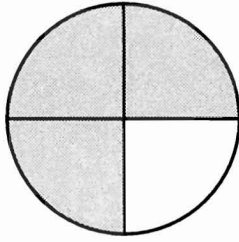
26 Nancy earns \$3.15 per hour, plus tips, working as a waitress. If she worked 5 hours on Saturday night and received a total of \$75.00 in tips, what were her total earnings for the evening?

- (1) \$390.75 (3) \$78.15
(2) \$90.75 (4) \$15.75

23 Which number is greater than -1?

- (1) -1 (3) -3
(2) -2 (4) 0

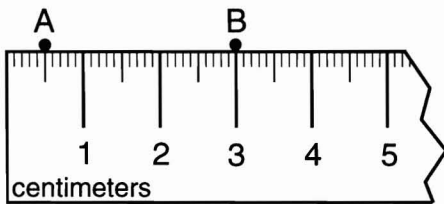
27 Part of the circle below is shaded.



What is the total percent shaded?

- (1) 25% (3) 3%
(2) 30% (4) 75%

28 On the ruler shown below, what is the distance from A to B?



- (1) 2.5 cm (3) 3 cm
(2) 2 cm (4) 3.5 cm

29 A recipe requires one egg for each $\frac{1}{2}$ cup of cream used. If $1\frac{1}{2}$ cups of cream are used, how many eggs are needed?

- (1) 1 (3) 3
(2) 2 (4) 4

30 A board game has 4 lion cards, 6 bear cards, 8 turtle cards, and 10 rabbit cards. What is the probability of a bear card being chosen when one card is drawn from the entire deck?

- (1) $\frac{4}{28}$ (3) $\frac{6}{28}$
(2) $\frac{10}{14}$ (4) $\frac{3}{28}$

31 The individual weights of four football players are 88 kilograms, 92 kilograms, 94 kilograms, and 86 kilograms. What is their average (mean) weight?

- (1) 94 kg (3) 90 kg
(2) 91 kg (4) 86 kg

32 What is the least common multiple (LCM) of 3, 4, and 6?

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

33 Which is the best estimate of 87×21 ?

- (1) 1600 (3) 2000
(2) 1800 (4) 2200

34 In the numeral 862.94, which digit is in the tenths place?

- (1) 9 (3) 6
(2) 2 (4) 4

38 What is the value of 5^3 ?

- (1) 15 (3) 125
(2) 53 (4) 555

35 What is 416,589 rounded to the nearest hundred?

- (1) 420,000 (3) 416,600
(2) 417,000 (4) 416,500

39 Which fraction has the smallest value?

- (1) $\frac{1}{3}$ (3) $\frac{1}{4}$
(2) $\frac{1}{8}$ (4) $\frac{1}{6}$

36 The number 34 is divisible by

- (1) 68 (3) 3
(2) 2 (4) 4

40 Solve for x : $\frac{5}{8} = \frac{x}{24}$

- (1) 15 (3) 3
(2) 21 (4) 120

37 A television set is purchased with a downpayment of \$125 and 10 monthly installments of \$25 each. What is the total cost of the television set?

- (1) \$150 (3) \$350
(2) \$250 (4) \$375

41 Carol purchased four frozen lunches at \$1.99 each. How much change did she get back from a \$10.00 bill?

- (1) \$2.04 (3) \$7.96
(2) \$3.04 (4) \$8.01

42 Which is equal to 80%?

- (1) 80
- (2) 8.0
- (3) 0.80
- (4) 0.08

43 Find the value of $4x - y$ when $x = 7$ and $y = 2$.

- (1) 26
- (2) 28
- (3) 30
- (4) 45

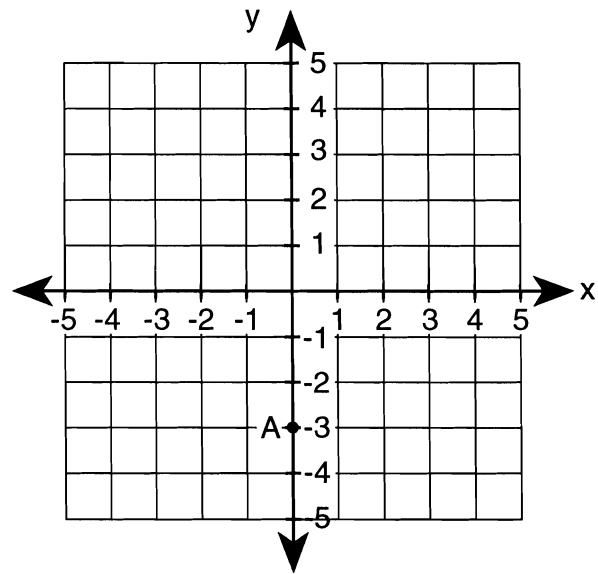
44 Artimus had \$312.50 in his checking account. He made deposits of \$18.25 and \$96.25 into his account and then wrote a check for \$97.25. What was his new balance?

- (1) \$100.75
- (2) \$319.75
- (3) \$327.00
- (4) \$329.75

45 What is the value of $9 \times 4 - 2 \times 6$?

- (1) 12
- (2) 24
- (3) 108
- (4) 204

46 What are the coordinates of point A in the graph below?



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

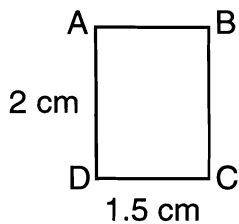
47 What is the area of a rectangular wall that is 8 feet high and 16 feet long?

- (1) 24 ft^2
- (2) 48 ft^2
- (3) 128 ft^2
- (4) 256 ft^2

48 The perimeter of an isosceles triangle is 24 inches. If each of the equal sides is 7 inches, how long is the third side?

- (1) 7 in
- (2) 10 in
- (3) 168 in
- (4) 200 in

49 According to the scale drawing below, what is the actual length of side \overline{AD} ?



Scale: 1cm = 2m

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

53 If the sales tax rate is 8%, what is the tax on a book priced at \$16.00?

- (1) \$0.13 (3) \$12.80
 (2) \$1.28 (4) \$17.28

54 If 3 pounds of rice cost \$0.87, how many pounds of rice can be bought for \$1.45?

- (1) 5 (3) 7
 (2) 6 (4) 8

50 If 50% of x is 10, then 75% of x is

- (1) 20 (3) 10
 (2) 15 (4) 5

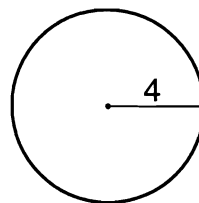
55 What is the product of 17.76 and 100?

- (1) 0.1776 (3) 177.6
 (2) 1.776 (4) 1776

51 Which pair of numbers has 8 as its greatest common factor (GCF)?

- (1) 2 and 4 (3) 16 and 24
 (2) 6 and 8 (4) 24 and 36

56 What is the circumference of a circle having a radius of 4? (Use the formula $C = 2\pi r$ and use $\pi = 3.14$)



- (1) 7.14 (3) 25.12
 (2) 12.56 (4) 50.24

52 Hal is 1.83 meters tall. What is his height in centimeters?

- (1) 0.0183 cm (3) 183 cm
 (2) 18.3 cm (4) 1830 cm

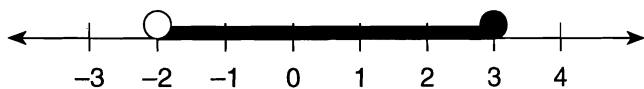
57 Which number is a prime number?

- (1) 31
- (2) 32
- (3) 33
- (4) 34

58 A real estate agent receives a 7% commission on every house sale. If he sells a \$100,000 house, what is his total commission?

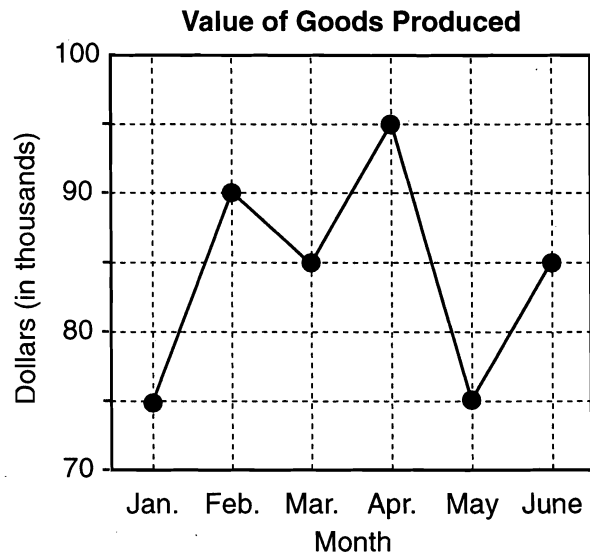
- (1) \$7
- (2) \$70
- (3) \$700
- (4) \$7,000

59 Which inequality is represented by the graph below?



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

60 The graph below shows the dollar value of goods produced by a company for a 6-month period.



Between which two consecutive months was the change in the dollar value of goods produced the greatest?

- (1) Jan. – Feb.
- (2) Mar. – Apr.
- (3) Apr. – May
- (4) Feb. – Mar.