The University of the State of New York
REGENTS COMPETENCY TEST

MATHEMATICS

Thursday, January 24, 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.
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: 1385
   + 648

4 Add: 7.8 + 1.54

5 A triangle has sides with lengths of 8 centimeters, 10 centimeters, and 12 centimeters. How many centimeters are in its perimeter?

6 Subtract: 80.62
   1.48

7 Subtract 368 from 3000.

8 Multiply: \( \frac{5}{6} \times \frac{1}{3} \)

9 Divide: \( \frac{4}{21.92} \)

2 The circle graph below shows the hair color of students at a junior high school. Which hair color do the least number of students have?

**STUDENTS' HAIR COLOR**

- **BROWN** 36%
- **BLACK** 28%
- **RED** 12%
- **BLOND** 24%

3 Write a numeral for fourteen thousand six hundred.
10 Multiply: \(6.3 \times 1.4\)

11 What is the value of \(15^2\)?

12 Divide: \(\frac{12}{2436}\)

13 The number 23 is what percent of 100? 

14 Solve for \(x\): \(4x + 5 = 17\)

15 Multiply: \(\frac{209}{408}\)

16 Add \(-8\) and \(-3\).

17 A car dealer sold the following number of cars:

<table>
<thead>
<tr>
<th>Day</th>
<th>Number Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>10</td>
</tr>
<tr>
<td>Tuesday</td>
<td>26</td>
</tr>
<tr>
<td>Wednesday</td>
<td>18</td>
</tr>
<tr>
<td>Thursday</td>
<td>16</td>
</tr>
<tr>
<td>Friday</td>
<td>10</td>
</tr>
</tbody>
</table>

What was the mean (average) number of cars sold per day?

18 Add: \(\frac{1}{4} + \frac{1}{3}\)

19 Sid drew a triangle. It had one right angle and a second angle with a measure of 60 degrees. How many degrees were in the third angle?

20 Divide: \(\frac{1}{8} \div 4\)
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 On the graph below, which period showed the least change in the percent of unemployment?

![Graph of unemployment percentages over time]

- July–Aug.
- Aug.–Sept.
- Sept.–Oct.
- Oct.–Nov.

22 The value of \(12 - (6 + 4)\) is

- (a) 10
- (b) 2
- (c) 14
- (d) 22

23 Patricia bought a computer with a $300 downpayment and made payments of $50 a month for 12 months. What was the total cost of the computer?

- (a) $350
- (b) $900
- (c) $3650
- (d) $4200

24 Sally had $2104 in her savings account. She made a withdrawal of $500 and then made a deposit of $114. What was the balance in Sally’s account after these transactions?

- (a) $2718
- (b) $2490
- (c) $1718
- (d) $1490

25 Which unit of measure should be used to express the distance from New York City to Washington, D.C.?

- (a) liter
- (b) centigram
- (c) hectare
- (d) kilometer

26 If a job pays $8.50 per hour, how much will a person earn in 1 1/2 hours?

- (a) $4.25
- (b) $8.50
- (c) $12.75
- (d) $25.50

27 If a car can travel 18 miles on 1 gallon of gasoline, how many gallons of gasoline will it need to travel 468 miles?

- (a) 21
- (b) 24
- (c) 26
- (d) 36
28 What is the length of the metal bar shown in the drawing below?

(a) 1 in  
(b) 1 \frac{1}{4} in  

(c) 1 \frac{1}{2} in  
(d) 1 \frac{3}{4} in

29 Jon bought a pair of shoes for $27.98. If he gave the clerk a $50 bill, how much change should he have received?

(a) $22.02  
(b) $23.02  

(c) $27.48  
(d) $77.98

30 When written as a decimal, 8% is equal to

(a) 0.8  
(b) 0.08

(c) 0.80  
(d) 0.008

31 What is 38,501 rounded to the nearest thousand?

(a) 30,000  
(b) 38,000

(c) 39,000  
(d) 40,000

32 In the triangle below, what is the ratio of AB to CB?

(a) \frac{5}{3}  
(b) \frac{5}{4}

(c) \frac{4}{3}  
(d) \frac{3}{4}

33 On a test that Shauna is taking, a question has 4 choices and only one correct answer. If she tries to guess the answer without reading the question, what is the probability that she will guess the correct answer?

(a) 1  
(b) \frac{1}{4}

(c) \frac{3}{4}  
(d) 4

34 A roast that takes 3 hours and 45 minutes to cook is put in an oven at 2:30 p.m. At what time should the roast be taken out?

(a) 5:45 p.m.  
(b) 6:00 p.m.

(c) 6:15 p.m.  
(d) 6:30 p.m.
35 Which fraction has the smallest value?
(a) \( \frac{2}{3} \)  
(b) \( \frac{3}{4} \)  
(c) \( \frac{4}{5} \)  
(d) \( \frac{5}{8} \)

36 On the graph below, which point has the coordinates \((-2, 4)\)?

38 If the charge for a telephone call from Buffalo, N.Y., to Washington, D.C., is $0.58 for the first minute and $0.42 for each additional minute, what would be the cost of a 7-minute telephone call?
(a) $3.52  
(b) $3.10  
(c) $2.94  
(d) $2.32

39 Find the value of \( x \):
\[ \frac{x}{15} = \frac{5}{75} \]
(a) 1  
(b) 5  
(c) 15  
(d) 75

40 Paul receives a 5% commission for every home computer he sells. If a home computer sells for $500, what is his commission?
(a) $250.00  
(b) $25.00  
(c) $5.00  
(d) $2.50

37 If a wooden board that is 3\( \frac{1}{4} \) feet long is cut into 3 pieces of equal length, how many feet long will each piece be?
(a) 1  
(b) \( \frac{11}{12} \)  
(c) \( \frac{11}{12} \)  
(d) \( \frac{9}{4} \)

41 A square root of 100 is
(a) 50  
(b) 25  
(c) 10  
(d) 5

42 Which is a prime number?
(a) 9  
(b) 15  
(c) 17  
(d) 21
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| 43 What is the area of a rectangle that is 4 centimeters wide and 6 centimeters long? | (a) 10 cm²  
(b) 12 cm² |
| 44 If a 25% discount is offered on a book that regularly sells for $7.99, which is the best approximation of how much money would be saved? | (a) $1  
(b) $2 |
| 45 Which is the mode of 10, 12, 12, 15, 16, 20, 27? | (a) 17  
(b) 16 |
| 46 On a blueprint of a school, 1 centimeter represents 5 meters. How many centimeters would represent a wall that is 15 meters long? | (a) 300  
(b) 75 |
| 47 What is the diameter of a circle whose radius is 14 centimeters? | (a) 7 cm  
(b) 28 cm |
| 48 Which is the greatest common factor of 8 and 20? | (a) 40  
(b) 2 |
| 49 Which is the value of $3.14 \times 10^2$? | (a) 0.0314  
(b) 31.4 |
| 50 When 12 is divided by -3, what is the quotient? | (a) -4  
(b) -36 |
| 51 Valerie’s weekly paycheck showed that she paid $24 in income taxes out of the $120 she earned that week. The income tax rate on her pay was | (a) 20%  
(b) 2% |
| 52 Mrs. Dean pays $7.00 for 3 $\frac{1}{2}$ pounds of cheese. What is the cost of one pound of cheese? | (a) $1.00  
(b) $2.00 |
53 According to the table below, what is the delivery charge to Zone II for a package that weighs 31.8 pounds?

### DELIVERY CHARGES

<table>
<thead>
<tr>
<th>Delivery Weight</th>
<th>Charges to Zone I</th>
<th>Charges to Zone II</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-0.5 lb</td>
<td>$0.86</td>
<td>$1.12</td>
</tr>
<tr>
<td>0.6-1 lb</td>
<td>1.16</td>
<td>1.45</td>
</tr>
<tr>
<td>1.1-2 lbs</td>
<td>1.39</td>
<td>1.65</td>
</tr>
<tr>
<td>2.1-3 lbs</td>
<td>1.44</td>
<td>2.04</td>
</tr>
<tr>
<td>3.1-4 lbs</td>
<td>1.50</td>
<td>2.25</td>
</tr>
<tr>
<td>4.1-5 lbs</td>
<td>1.56</td>
<td>2.44</td>
</tr>
<tr>
<td>5.1-6 lbs</td>
<td>1.62</td>
<td>2.63</td>
</tr>
<tr>
<td>6.1-7 lbs</td>
<td>1.68</td>
<td>2.84</td>
</tr>
<tr>
<td>7.1-8 lbs</td>
<td>1.73</td>
<td>3.03</td>
</tr>
<tr>
<td>8.1-9 lbs</td>
<td>1.79</td>
<td>3.22</td>
</tr>
<tr>
<td>9.1-10 lbs</td>
<td>1.85</td>
<td>3.32</td>
</tr>
<tr>
<td>10.1-11 lbs</td>
<td>1.89</td>
<td>3.36</td>
</tr>
<tr>
<td>11.1-12 lbs</td>
<td>1.94</td>
<td>3.45</td>
</tr>
<tr>
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<td>3.83</td>
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<td>16.1-17 lbs</td>
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<td>17.1-18 lbs</td>
<td>$2.23</td>
<td>$4.08</td>
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<td>18.1-19 lbs</td>
<td>2.28</td>
<td>4.19</td>
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<tr>
<td>19.1-20 lbs</td>
<td>2.33</td>
<td>4.32</td>
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<tr>
<td>20.1-21 lbs</td>
<td>2.40</td>
<td>4.44</td>
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<tr>
<td>21.1-22 lbs</td>
<td>2.45</td>
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<tr>
<td>22.1-23 lbs</td>
<td>2.50</td>
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<td>23.1-24 lbs</td>
<td>2.56</td>
<td>4.80</td>
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<td>24.1-25 lbs</td>
<td>2.61</td>
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<td>25.1-26 lbs</td>
<td>2.68</td>
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<td>26.1-27 lbs</td>
<td>2.73</td>
<td>5.18</td>
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<td>27.1-28 lbs</td>
<td>2.78</td>
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<td>28.1-29 lbs</td>
<td>2.84</td>
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<td>29.1-30 lbs</td>
<td>2.89</td>
<td>5.54</td>
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<tr>
<td>30.1-31 lbs</td>
<td>2.95</td>
<td>5.66</td>
</tr>
<tr>
<td>31.1-32 lbs</td>
<td>3.01</td>
<td>5.79</td>
</tr>
<tr>
<td>32.1-33 lbs</td>
<td>3.06</td>
<td>5.91</td>
</tr>
<tr>
<td>33.1-34 lbs</td>
<td>3.11</td>
<td>6.03</td>
</tr>
<tr>
<td>34.1-35 lbs</td>
<td>3.17</td>
<td>6.15</td>
</tr>
</tbody>
</table>

- (a) $1.50
- (b) $2.25
- (c) $3.01
- (d) $5.79

54 Which decimal has the least value?
- (a) 0.505
- (b) 0.2364
- (c) 0.90
- (d) 0.7

56 From $1 - \frac{3}{8}$ subtract $\frac{1}{2}$.
- (a) $\frac{7}{8}$
- (b) $1\frac{1}{8}$
- (c) $\frac{1}{2}$
- (d) $\frac{2}{6}$

55 The girls in Margie's gym class are 150, 155, 158, 160, 165, 167 and 182 centimeters tall. What is the median height of the girls?
- (a) 32 cm
- (b) 159 cm
- (c) 160 cm
- (d) 162 cm

57 The price of a bicycle is $50.00. If the sales tax is 7%, what is the amount of the sales tax?
- (a) $3.50
- (b) $35.00
- (c) $46.50
- (d) $53.50
58 A grocer's sales for 6 days were $920. If the sales continue at the same rate, what will be the total sales for 30 days?

(a) $2760  (c) $5520
(b) $4600  (d) $27,600.

59 Robert can buy 1 doughnut for $0.18. What is the greatest number of doughnuts he can buy for $2.00?

(a) 10  (c) 3
(b) 11  (d) 12

60 Which drawing is an example of perpendicular lines?

(a)  (c)
(b)  (d)