

The University of the State of New York
REGENTS HIGH SCHOOL EXAMINATION
BUSINESS MATHEMATICS

B

Thursday, June 23, 1977 — 1:15 to 4:15 p.m., only

Instructions for Part I — Rapid Calculation Test

Do not begin this part until the signal is given.

Scrap paper may be used. Place your answers only in the spaces provided in this booklet. At the end of 15 minutes, work must stop and this booklet must be immediately handed to the examiner. No partial credit will be allowed.

Be sure to write your name in the proper space on the back of this sheet.

DO NOT OPEN THIS EXAMINATION BOOKLET UNTIL THE SIGNAL IS GIVEN.

All answers must be written with blue or black pen.

When you have completed the examination, you must sign the statement printed at the end of the answer booklet, indicating that you had no unlawful knowledge of the questions or answers prior to the examination and that you have neither given nor received assistance in answering any of the questions during the examination. Your answer booklet cannot be accepted if you fail to sign this declaration.

Part I

RAPID CALCULATION TEST

Pupil

Directions (1–18): Write the correct answer to *each* of the following in the blank space at the right of each question. Scrap paper may be used. [18]

- | | |
|---|---------------|
| 1 An invoice for \$450 is subject to a 3% cash discount. What is the amount of the discount? | 1....\$..... |
| 2 Divide $3\frac{5}{9}$ by $2\frac{2}{3}$ and express the result in <i>simplest form</i> . | 2..... |
| 3 A roadmap uses a scale of $\frac{1}{4}$ inch equals one mile. How many miles would be represented by a line $6\frac{1}{2}$ inches long? | 3..... |
| 4 At a price of \$.25 per article, how many may be purchased for \$24? | 4..... |
| 5 If 2.5 centimeters equals 10 typing spaces, how many centimeters are there in a 40-space typing line? | 5..... |
| 6 A car can travel 16 kilometers on 4 liters of gasoline. How many kilometers will it travel on 20 liters? | 6..... |
| 7 A student who typed 40 words per minute at the end of the first semester is now typing 50 words per minute. What is the percent of increase in her typing speed? | 7..... |
| 8 What is the cost of 5,115 envelopes @ \$.20 per C? | 8....\$..... |
| 9 What would be the cost of 32 quarts at 67¢ per quart? | 9....\$..... |
| 10 What is the exact number of days from September 23 to November 2? | 10..... |
| 11 If it is 25° Celsius and a conversion to Fahrenheit temperature can be made by multiplying the Celsius temperature by $\frac{9}{5}$ and adding 32, what is the Fahrenheit temperature? | 11..... |
| 12 There are 1,000 grams in a kilogram. If coffee costs 60¢ per 100 grams, what is the cost per kilogram? | 12....\$..... |
| 13 What is the amount of interest on \$600 for 96 days at 6%? | 13....\$..... |
| 14 The loan value on a life insurance policy is \$15.80 per \$1,000. Gomez has a \$5,000 policy. How much can he borrow? | 14....\$..... |
| 15 A wall 28 feet long is to be filled as completely as possible with file cabinets. If each file cabinet is $1\frac{3}{4}$ feet wide, how many cabinets can be placed along the wall? | 15..... |

BUSINESS MATHEMATICS — *concluded*

- 16 What is the amount of interest on \$1,200 for 30 days at 9%? 16....\$.
- 17 What is $\frac{1}{2}\%$ of \$484? 17....\$.
- 18 Divide 47.61 by 1.3, giving the answer to the *nearest tenth*. 18.

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B

BUSINESS MATHEMATICS

Thursday, June 23, 1977 — 1:15 to 4:15 p.m., only

The answers to the questions on the following parts of this examination are to be written in the separate answer booklet. Be sure to fill in the heading of your answer booklet and sign the statement printed at the end after you have completed the examination. In recording your answers, be sure to write the number of the problem and the answer in the proper spaces.

DO NOT OPEN THIS EXAMINATION BOOKLET UNTIL THE SIGNAL IS GIVEN

Part II

Answer any 18 of the 20 questions in this part. Scrap paper may be used. Write only your answers in the separate answer booklet. No partial credit will be allowed. [36]

1 One department in a store uses 600 square feet of floor space. What percent of the rent should be charged to this department if the total floor space in the store is 3,000 square feet?

2 Davis insured his automobile for one year and paid the following premiums:

Public Liability	\$114.44
Property Damage	31.90
Collision	42.00
Comprehensive	17.76
Towing	2.50
Uninsured Motorists	4.00

At the end of the year, Davis received a 25% discount based on the total premium. What is the net cost of this automobile insurance to Davis?

3 Pratt purchased 10 shares of Colonial Corporation common stock at a market price of $87\frac{1}{2}$ and 85 shares of Pasteur Drug Company common stock at a market price of 12. What was the cost of this stock, excluding any commission or other expenses?

4 On October 1, Blair's bank statement showed a balance of \$3,897.50. Outstanding checks totaled \$879.82. A deposit of \$216.85, mailed to the bank on September 30, did not appear on the bank statement. What was Blair's correct available bank balance on October 1?

5 Michelle Stanton sells soda pop at a beach. She started with 6 cases, and received the following quantities during the day: 5 cases, 4 cases, 7 cases. At the end of the day, she had 2 cases left. If she received a commission of 75¢ for each case sold, how much did she earn?

6 A ticket office sold the following numbers of tickets on five successive days: 139, 216, 44, 312, 74. What was the average number of tickets sold per day during those five days?

7 Mr. Fields borrowed \$3,500 for one year with interest at $7\frac{1}{2}\%$. How much interest did he pay?

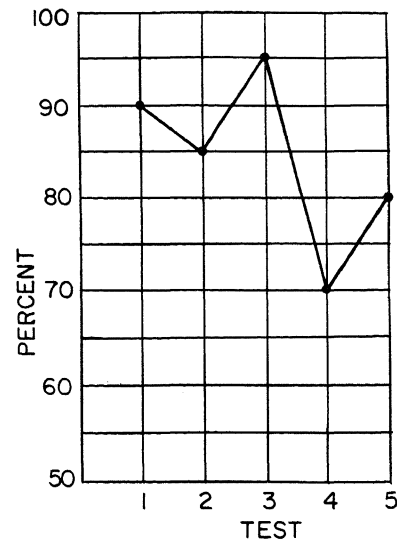
8 A chair marked at \$60 was sold with a series of discounts of 25% and 20%. What net amount was paid by the customer who bought this chair?

9 Martha Shaw is paid \$150 a week. If her employer deducts 5.85% of Ms. Shaw's salary as her contribution to FICA tax, what is the amount of the deduction?

10 Alice Strauss has a 30-year mortgage that requires a monthly payment of \$125. If the original mortgage was for \$20,000, how much will Strauss pay in total interest over the 30-year period?

11 A salesman is paid \$75 a week plus a commission of 5% on all sales. If his sales for a certain week amounted to \$800, what were his total earnings for that week?

Base your answer to question 12 on the graph below which shows the marks for Kimberly Jones' five short-hand tests.



12 What mark will Kimberly need to score on her next test to raise her average to 85?

13 Mr. Longo purchased a 35-millimeter camera for \$210. After using the camera for three years, he traded it for a new one and received \$60 as a trade-in allowance. What was the amount of average annual depreciation on the camera?

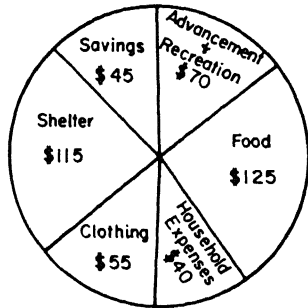
14 Marlene Norris works in a restaurant $7\frac{1}{2}$ hours each day Monday through Friday and $2\frac{1}{2}$ hours on Saturday. She is paid \$2.30 an hour. What is the amount of her gross earnings before deductions?

15 Vroman paid \$63 as the annual premium for fire insurance on his property. After 90 days, Vroman canceled the policy. The insurance company kept 35% of the annual premium and refunded the balance to Vroman. What amount of money was refunded to Vroman by the insurance company?

16 If two handkerchiefs cost \$.49, how much will three dozen handkerchiefs cost?

Base your answer to question 17 on the information and diagram below.

Mr. James spends his salary as follows:



17 What percent of his total salary does he save?

18 What single percent of discount is equal to a discount series of 30% and 20%?

Base your answer to question 19 on the departmental report below.

COMPARATIVE DEPARTMENTAL SALES REPORT
For the Quarter Ending March 31, 1977

Dept.	SALES		
	January	February	March
A	\$4,545	\$4,962	\$5,682
B	3,675	3,796	4,865

19 What were the average monthly sales of Department B for the three-month period?

20 The installment price of an article is 15% more than the cash price. If the cash price is \$324, what is the installment price?

Part III

Answer any four of the five questions in this part. All work must be shown in the answer booklet. Partial credit may be allowed. [16]

21 The Ajax Company uses a code to mark the cost price on their merchandise. The code word MISFORTUNE is used to indicate the digits 1 through 0. A clock radio marked with the code letters SOEE is to be marked up 40% on its cost. What will be its selling price?

22 A bond with a par value of \$1,000 earns $8\frac{1}{4}\%$ interest per year, payable every six months. How much interest will the owner of 16 of these bonds receive every six months?

23 What is the total amount spent each year for the following insurance coverage?

Fire Insurance \$35 per year
Windstorm & Hail Coverage \$ 1.10 a month
\$1,100 Personal Property Floater at \$5.67 per \$100

24 Kemp bought a house for \$44,500. What would be the amount of Kemp's property tax, if the property is assessed at \$26,000 and the tax rate is \$22.80 per \$1,000?

25 The Mills Manufacturing Company pays its employees on the assembly line 15¢ each for all parts accepted on any one day. During a recent week, Harold Hunt completed the following:

	<u>Pieces Produced</u>	<u>Pieces Rejected</u>
Monday	110	5
Tuesday	132	10
Wednesday	120	0
Thursday	117	6
Friday	125	9

What were his gross earnings for the week?

Part IV

Answer any five of the seven questions in this part. All work must be shown in the answer booklet. Partial credit may be allowed. [30]

26 King insured his home for \$22,500 at an annual rate of \$.78 per \$100. After he had paid six annual premiums on this policy, a fire damaged the home, and King was paid \$8,965.25. How much money did King save by carrying fire insurance on this building?

27 Daly, Clark, and Neville are partners with investments of \$24,000, \$16,000, and \$10,000, respectively. The partnership agreement states that profits and losses are to be shared in proportion to the partners' investments. The net profit last year amounted to \$31,252. What amount of money would be Neville's share of this profit?

28 A washing machine selling for \$250 can be purchased on the installment plan by paying \$25 down, plus a credit charge of 8% on the remaining unpaid balance. If the machine is to be paid for in 18 months, how much will each monthly payment be?

29 Riley works as a car salesman. He is paid a commission of 5% on all sales, as well as \$50 for each car he sells, and \$75 for each truck he sells. His sales sheet for the month is as follows:

<u>Number of Units Sold</u>	<u>Total Sales Price</u>
7 cars	\$15,250
2 trucks	13,700

What were Riley's total earnings for the month?

30 Meehan owns an apartment house for which he receives rent of \$4,800 a year. His expenses for the year were:

- Interest at 9% on the mortgage of \$24,000
- 2% depreciation on the house valued at \$26,000
- Taxes, insurance, repairs, etc. \$995

What was his net income for the year?

31 On May 1, Diane Brown's checkbook showed a balance of \$291.17. Her bank statement balance on the same day was \$516.87. Checks outstanding were: \$75.00; \$37.50; \$10.80; \$104.90. The service charge shown on the bank statement was \$2.50. What was Brown's correct available checkbook balance?

32 Martin earned \$15,300 salary last year and received \$400 in interest on his savings account. He deducted the following amounts on his income tax form:

- Medical Expenses \$ 160
- Taxes 1,240
- Interest 896
- Contributions 200
- Union Dues, \$7 per month

What is his taxable income?

FOR TEACHERS ONLY

BM

SCORING KEY

BUSINESS MATHEMATICS

B

Thursday, June 23, 1977 — 1:15 to 4:15 p.m., only

Use only *red* ink or *red* pencil in rating Regents papers. Do not attempt to *correct* the pupil's work by making insertions or changes of any kind. Use checkmarks to indicate pupil errors.

Scores should be cumulated within parts of the examination and transferred to the cover of the answer booklet.

Part I — Rapid Calculation Test

Allow a total of 18 credits, one credit for each of the following. [Allow no partial credit.]

- | | | | |
|--------------------|-------------|-----------------|-------------|
| (1) \$13.50 | (6) 80 | (11) 77° | (16) \$9.00 |
| (2) $1\frac{1}{3}$ | (7) 25% | (12) \$6.00 | (17) \$2.42 |
| (3) 26 | (8) \$10.23 | (13) \$9.60 | (18) 36.6 |
| (4) 96 | (9) \$21.44 | (14) \$79.00 | |
| (5) 10 | (10) 40 | (15) 16 | |

Part II

Allow credit for only 18 of the 20 questions in this part. If more than 18 questions are answered, only the first 18 answered should be considered. Allow a total of 36 credits, two credits for each correct answer. [Allow no partial credit.]

- | | |
|------------------|-----------------|
| (1) 20% | (11) \$115.00 |
| (2) \$159.45 | (12) 90 |
| (3) \$1,895.00 | (13) \$50.00 |
| (4) \$3,234.53 | (14) \$92.00 |
| (5) \$15.00 | (15) \$40.95 |
| (6) 157 | (16) \$8.82 |
| (7) \$262.50 | (17) 10% |
| (8) \$36.00 | (18) 44% |
| (9) \$8.78 | (19) \$4,112.00 |
| (10) \$25,000.00 | (20) \$372.60 |

BUSINESS MATHEMATICS — *concluded*

Part III

Allow a total of 16 credits, 4 credits for each of four groups. If more than four groups are answered, only the first four answered should be considered. [Allow partial credit as indicated in the pamphlet entitled *Suggestions for the Rating of Regents Examination Papers in Business Subjects* as recorded under Part IV.]

(21) \$49.00
(22) \$660.00
(23) \$110.57

(24) \$592.80
(25) \$86.10

Part IV

Allow a total of 30 credits, 6 credits for each of five questions. If more than five questions are answered, only the first five answered should be considered. [Allow partial credit as indicated in the pamphlet entitled *Suggestions for the Rating of Regents Examination Papers in Business Subjects*.]

(26) \$7,912.25
(27) \$6,250.40
(28) \$13.50
(29) \$1,947.50

(30) \$1,125.00
(31) \$288.67
(32) \$13,120.00