The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

BUSINESS MATHEMATICS

Friday, June 17, 1977 — 1:15 to 4:15 p.m., only

Instructions for Part I — Rapid Calculation Test

<u>Do not begin this part until the signal is given.</u>

<u>Scrap paper may be used.</u> 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.

<u>All answers must be written with blue or black pen.</u>

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.

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 Subtract: 682
              −135⅛   1....................

2 What would be the due date of an 80-day promissory note dated May 15?   2....................

3 A promissory note for three months is dated March 16. What is the due date of this note?   3....................

4 The Swanson Realty Company bought 35 acres of land to be divided into lots of 1¼ acres each. How many lots will be available?   4....................

5 If nails sell for 19¢ per pound, what will be the cost of 3½ pounds of nails? Give your answer to the *nearest whole cent*.   5....................

6 The distance in miles can be found by multiplying the kilometers traveled by 0.6. If a woman travels 200 kilometers, how far will she travel in miles?   6....................

7 A store had sales of $45,000 during the past year. If $9,000 represents the sale of paint, what percent of total sales were the paint sales?   7....................

8 On his first four tests in arithmetic, Frank's total score was 340. On the fifth test he earned a 90, and on the sixth a 92. Find Frank's average grade on the six tests.   8....................

9 The staff of a hospital performed 75 operations last week and 90 operations this week. What was the percent of increase?   9....................

10 If it is 20°C (Celsius) and a conversion to Fahrenheit temperature can be made by multiplying the Celsius temperature by 9/5 and adding 32, what is the Fahrenheit temperature?   10....................

11 Fahrenheit temperature can be changed to its equivalent Celsius temperature by subtracting 32 and multiplying the remainder by 5/9. Change 86° Fahrenheit to its equivalent Celsius temperature.   11....................

12 If a liter is equal to 1.06 quarts, how many quarts are there in 500 liters?   12....................

13 An invoice for $642.50 is subject to a 2% cash discount. How much is the cash discount?   13....$................

14 What is the amount of interest on $1,200 for 120 days at 8%?   14....$................

15 What is ½% of 624?   15....................

16 What is the cost of 10,500 index cards @ $30 per M?   16....$..............

17 Mary Smilen bought a stereo for $148.80. If she has 12 months to pay, what is the amount of each monthly payment?   17....$..............

18 Divide 241.67 by 3.4, giving the answer to the *nearest tenth*.   18...................

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

BUSINESS MATHEMATICS

Friday, June 17, 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 A television set that usually sells for $400 is to be reduced to $340. What is the percent of discount being offered?

2 The materials used to build 300 cabinets cost a factory $2,790. Salaries and wages charged to the job amounted to $4,276 and factory overhead was $743. What was the average cost per cabinet?

3 An invoice for $465, dated October 19, terms 1/10, n/30, was paid on October 29. What was the amount of the cash discount?

4 What amount of money is necessary to pay a bill for $658, dated September 21, terms 3/15, n/60, if it is paid within 15 days of the date of invoice?

5 A check for $111.55 was drawn in payment of an invoice amounting to $115.00, less a cash discount. What rate of cash discount was allowed?

6 A store which uses the code words COUNTRY PIE for the key numbers 1 through 0 has an item marked TRPI. These code letters show the cost of an item which sells for $85.49. What is the amount of the gross profit on this item?

7 Barney's bank statement showed a balance of $72.25. A comparison of his bank statement and his check stubs showed outstanding checks for $8.50 and $3.75. What is his correct available bank balance?

8 On May 31, Whitney's checkbook showed a balance of $316.42. His bank statement for May included a service charge of $2.50. What should his correct checkbook balance be?

9 Gleason's checkbook for the month of April showed a balance of $274.65. A check for $85 was incorrectly entered on the check stub as $58. What is Gleason's correct checkbook balance?

10 Find the cost per year to the employer for a work station for a repairman who is paid wages of $10,400 a year. Other costs are: fringe benefits, 7% of wages; floor space, $220; equipment and tools, $100; and other expenses, $92.

11 Barrett is paid a salary of $80 a week and 3% commission on sales over $600. Last week his sales amounted to $1,150. How much did Barrett earn that week?

12 A small business had a net profit of $17,500 and a gross profit of $70,000. What percent of the gross profit was the net profit?

13 Hugh Kane bought some real estate for $32,500. He made a downpayment of 25% and borrowed the rest of the cost from a bank. How much did Kane borrow from the bank?

14 The school tax rate in a suburban community is $8.50 per $100 of assessed valuation. If Brown's house is assessed for $6,500, what is the amount of Brown's school tax?

15 When Lisa Haller increased coverage on her automobile for bodily injury insurance, her premium for this protection increased 8%. If she had been paying $185 for her insurance, what will her new policy cost?

16 Marshall owns 155 shares of stock which pay a semiannual dividend of $.65 per share. What amount of money should he receive as dividends during a one-year period?

17 Vollmer bought 15 shares of Mohawk Company stock at 38¾. Brokerage commission and other expenses totalled $11.80. What was the total cost of this purchase to Vollmer?

18 Arlene Smith has a taxable income of $8,500. The income tax table on the line "8,000 to 9,000 income" reads $1,200 plus 20% of the excess over $8,000. How much is her income tax?

19 A family of six budgets $75.00 a week for food. For the first three weeks of a recent month, the following amounts were spent for food: 1st week $68.73; 2nd week $82.40; 3rd week $71.80. How much can be spent the last week of the month for food and still stay within the family's budget?

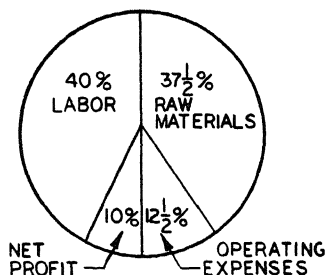20 What is the cost of 3,500 pounds of coal at $16 per ton?

Bus. Math.–June '77   [2]

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 On September 30, Gaylord deposited the following bills and coins in his checking account: four twenty-dollar bills, six ten-dollar bills, three five-dollar bills, twelve one-dollar bills, seven half-dollars, sixteen quarters, eighteen dimes, six nickles, and thirteen pennies. What was the total amount of the deposit made on September 30? [4]

22 Gloria Johnson discounted her own 60-day, non-interest-bearing promissory note for $960 at the bank on October 5 at 8%. How much did Johnson receive from the bank as net proceeds after the bank discount had been deducted? [4]

23 The chart below shows how each sales dollar of the annual sales of the Pool Village Manufacturing Company was used in 1973. If the cost of labor was $25,600, what was the total amount of sales? [4]

24 Huffmire, who paid an annual premium of $91.20 for public liability automobile insurance, now pays an annual premium of $82.08 because of her safe driving record. What was the percent of decrease in the annual premium? [4]

Base your answer to question 25 on the Social Security tax table and on the partial payroll record for one employee of the Trinity Company below.

SOCIAL SECURITY EMPLOYEE TAX TABLE

5.85 percent employee tax deductions

Wages		Tax to be withheld
At least	But less than	
181.97	182.14	10.65
182.14	182.31	10.66
182.31	182.48	10.67
182.48	182.65	10.68
182.65	182.83	10.69
182.83	183.00	10.70
183.00	183.17	10.71
183.17	183.34	10.72
183.34	183.51	10.73
183.51	183.68	10.74
183.68	183.85	10.75
183.85	184.02	10.76
184.02	184.19	10.77
184.19	184.36	10.78
184.36	184.53	10.79
184.53	184.71	10.80
184.71	184.88	10.81
184.88	185.05	10.82
185.05	185.22	10.83
185.22	185.39	10.84

Name	Total Wages	All other Deductions
Ford, T.	182.85	24.70

25 Find the amount of Ford's net take-home pay. [4]

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 A catalog lists an office machine at $640 less 25%, 20%, and 20%. What will be the invoice price of this machine?   [6]

27 Sanders has a choice of plans by which to purchase a piece of furniture on the installment plan. Plan *A* has no downpayment and has monthly payments of $14.50 each for two years. Plan *B* calls for a $50 downpayment and monthly payments of $15 each over an 18-month period. By what amount does the more expensive plan exceed the other?   [6]

28 A used car can be purchased for cash for $3,190. If this car is purchased on the installment plan, it will be necessary to make a downpayment of $910 and 24 monthly payments of $105. How much more does it cost to buy this car on the installment plan?   [6]

29 On January 31, 1974, Jan Williams' checkbook showed a balance of $1,394.81. Her bank statement balance on that same date was $1,528.43. There were no service charges for the month. A comparison of the cancelled checks with the check stubs showed outstanding checks for $21.97, $173.14, and $70.49. A cancelled check for $48.50 had not been entered in the checkbook. Williams also found that a deposit of $83.48 had not been entered on the bank statement. Prepare a bank reconciliation statement for Williams, indicating her correct available checkbook balance.   [6]

30 Burton is paid on a 40-hour-per-week basis, with time-and-one-half for overtime. He worked 46 hours last week. His regular hourly wage rate is $2.40. If the total deductions from his earnings amounted to $29.72, what was the amount of his net take-home pay?   [6]

31 Smith and Williams invested $30,000 and $20,000, respectively, in a partnership business. They decided to pay each partner 10% interest on his investment and divide the rest of the profit equally.

What total share of profit (including interest) would Smith receive if the profit for a particular year was $45,000?   [6]

32 Cook owns a house and lot assessed at $6,200. Last year the county tax rate in his area was $26.40 per $1,000 of assessed valuation. If his tax rate is increased by $1.80 per $1,000 this year, what will be the amount of his tax for this year?   [6]

FOR TEACHERS ONLY

BM

SCORING KEY

BUSINESS MATHEMATICS

Friday, June 17, 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) $546\frac{7}{8}$	(6) 120	(11) 30	(16) $315.00
(2) August 3	(7) 20%	(12) 530	(17) $12.40
(3) June 16	(8) 87	(13) $12.85	(18) 71.1
(4) 28	(9) 20%	(14) $32.00	
(5) 67¢	(10) 68	(15) 3.12	

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) 15%	(11) $96.50
(2) $26.03	(12) 25%
(3) $4.65	(13) $24,375
(4) $638.26	(14) $552.50
(5) 3%	(15) $199.80
(6) $28.60	(16) $201.50
(7) $60.00	(17) $593.05
(8) $313.92	(18) $1,300
(9) $247.65	(19) $77.07
(10) $11,540	(20) $28.00

[OVER]

Part III

Allow a total of 16 credits, 4 credits for each of four questions. If more than four questions 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) $176.73

(22) $947.20

(23) $64,000

(24) 10%

(25) $147.45

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) $307.20

(27) $28.00

(28) $240.00

(29) $1,346.31

(30) $87.88

(31) $23,000

(32) $174.84