The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

BUSINESS MATHEMATICS

B

Friday, June 23, 1978 — 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.

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 Add: $ 1.09
         24.63
      217.85
         1.42
       72.89
      ‾‾‾‾‾‾   1....$..............

2 Subtract: 6,185
            −1,796   2...................

3 Multiply $7\frac{1}{3}$ by $4\frac{1}{2}$.   3...................

4 Divide $43.52 by 17.   4....$..............

5 Subtract: 84
           $-12\frac{5}{8}$ 5...................

6 Multiply 48 by $\frac{2}{3}$.   6...................

7 What is the interest on $360 for 30 days at 8%?   7....$..............

8 What percent less than 96 is 72?   8...................

9 375 is $\frac{5}{4}$ of what number?   9...................

10 What is the cost of 250 pounds of paper at $4 per cwt?   10....$..............

11 A 12-ounce package of tea sells for 84¢. What amount of money would a pound of tea cost?   11....$..............

12 What would be the amount of a 7% sales tax on a purchase of $3,000?   12....$..............

13 Neckties are priced at $4.45 each or 3 for $9.95. How much would a customer save by buying 3 ties at one time rather than 3 ties one at a time?   13....$..............

14 Ericson's automobile collision insurance policy has a $150 deductible clause. If a collision caused damage of $375 to his car, how much would he collect from his insurance company?   14....$..............

15 What percent of discount was allowed when a suit marked $99 was sold for $66?   15...................

16 Express .12 as a common fraction in its *lowest terms.*   16...................

17 A creditor is to receive 45% on her claim of $755. What amount of money will she receive?   17....$..............

18 Add: 7 km   5 hm
         3 km   7 hm
      ‾‾‾‾‾‾‾‾‾‾‾   18...................

BUSINESS MATHEMATICS

Friday, June 23, 1978 — 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

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 desk cost $450 when new. After six years of use it had a trade-in value of $90. What was the amount of the *average annual* depreciation on the desk?

2 The yearly cost to operate one floor in an office building is as follows:

Salaries $105,000
Floor space 15,000
Furniture & equipment 26,000
Service contract on office machines 1,500
Other expenses 2,500

The Excel-Trix Division is charged for 2 percent of the yearly cost above. What amount is charged to the Excel-Trix Division?

3 A retail store uses the code word SUPERCLOWN to indicate the digits 1 through 0 in its cost coding. An article marked with the cost code ERNN sells for $90.00. What percent of the selling price is its gross profit?

4 Harold and Joyce Martin are filing a joint income tax return. Their income last year was $7,600. He is getting an increase of $460 this year. Based on the table below, how much Federal income tax will they now pay for the year at the new salary?

If line 47 (taxable income) is—		And you are—			
Over	But not over	Single	Married filing separately	Head of a household	Married filing jointly *
			Your tax is—		
7,550	7,600	1,488	1,524	1,387	1,299
7,600	7,650	1,500	1,536	1,398	1,309
7,650	7,700	1,512	1,549	1,409	1,318
7,700	7,750	1,524	1,561	1,420	1,328
7,750	7,800	1,536	1,574	1,431	1,337
7,800	7,850	1,548	1,586	1,442	1,347
7,850	7,900	1,560	1,599	1,453	1,356
7,900	7,950	1,572	1,611	1,464	1,366
7,950	8,000	1,584	1,624	1,475	1,375
8,000	8,050	1,596	1,637	1,486	1,386
8,050	8,100	1,609	1,651	1,497	1,397
8,100	8,150	1,621	1,665	1,509	1,408

5 Knox bought a second-hand car at a price of $898.00, with terms of 2/10, n/30. If Knox paid cash within ten days after buying the car, what was the amount of money he paid the car dealer?

6 A cement mixer can be rented for $2.50 per hour. What is the total cost of renting the cement mixer for 4 hours per day on 5 different days?

7 Kent is buying an office copier on the installment plan for a total cost of $155. He made a downpayment of $20 and is paying the rest in equal monthly installments of $15 each. How many months will it take Kent to pay for the copier?

8 Arman Cordova is planning to purchase a car for $5,200. The local car dealer will finance the car for 42 months at $152.20 per month, while his credit union will finance the car for 36 months at $165.31 per month. How much less is the cheaper plan?

9 Brenda Homer received $175 a month from each apartment in a 4-family house for an entire year. During that year, she had expenses of $4,347.19. How much was her profit for the year?

10 Based on the graph below, what was the amount of Edward Wilson's *average* weekly sales for the four-week period?

BURTON CLOTHING CO.
weekly sales of Edward Wilson
for May 1978
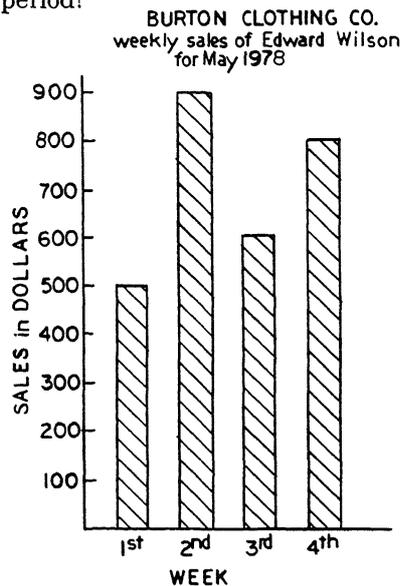
11 On May 25, Drake borrowed money from her bank on an 80-day note. On what date did the note fall due?

12 The catalog price of an item is $184.50 less 40%. What is the net price?

13 ABC Trucking Firm's rate between Buffalo and Rochester is $4.50 per 100 pounds. What would be the total freight charges on a shipment of goods consisting of 5 cartons weighing 180 pounds each and 4 cartons weighing 75 pounds each?

14 Sally Swiss is working 40 hours a week for $136.80. What hourly rate would she have to receive in order to earn the same weekly wage for working only 36 hours?

15 What amount of money should a partner receive as his share of his firm's net profit of $9,760 if he was entitled to $62\frac{1}{2}\%$ of this profit?

16 Robert Shafer's bank statement for the month of May showed a balance of $564.60. Mr. Shafer knew that a deposit of $150 had been made too late to be entered on the bank statement. How much money should he consider to be his available bank balance at the end of May?

17 The M & L Corporation had the following costs to manufacture 1,000 key chains.

Raw materials $315.00
Labor 536.00
Other expenses 199.00

What is the unit cost for each key chain?

18 Burton has an endowment policy on which he pays a monthly premium of $27.20. On the anniversary date of the policy, he received a dividend of $112.80. What was the net cost of the policy for the year?

19 John Dillon's earnings for one week were $256.80. If the FICA rate is 6.05%, what will be Dillon's pay after the social security tax is deducted?

20 Martin Poole purchased 100 shares of stock that cost $3,200 including commission. He received a yearly dividend of $2.56 per share of stock. What yearly percent of income did he receive on his investment?

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 rate for fire insurance in Georgetown is 39¢ per $100 of coverage. In Johnstown, the rate per $100 is only 33¢. How much less would $17,000 worth of insurance cost in Johnstown?

22 Herrick purchased 35 shares of stock at $28\frac{3}{4}$ per share. Brokerage and other fees totaled $15.06. What total amount of money did she pay for the stock?

23 Elkins is employed on a 40-hour-per-week basis, with time-and-one-half for overtime. Last week he worked a total of 48 hours. If his regular wage is $3.20 per hour, what total amount of money did he earn last week?

24 Haire sells vacuum cleaners. He receives a weekly commission of $5.00 each on the first 5 cleaners sold, $7.00 each on the next 10, and $9.00 each on any additional cleaners sold. During the first week of June he sold 18 cleaners. What were his gross earnings for the week?

25 Richards bought a lot for $3,300 and paid $475 to an architect for drawing a set of building plans for a one-family house. The contractor's cost of labor and materials amounted to $28,225. In addition, Richards had to pay 20% of the cost of the labor and the materials to the contractor as his profit. What was the total cost of the land and the house to Richards?

☞ GO RIGHT ON TO THE NEXT PAGE.

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 Fenton works at a regular hourly rate of $2.25. Last week he worked 38 hours. This week he increased his earnings by 18% by working overtime. What amount of money did Fenton receive as total earnings for this week?

27 Ms. Haverson's bank statement as of March 31 showed a balance of $2,095.24. Her checkbook balance was $2,509.35. The outstanding checks were: $11.25; $104.70; $86.44. A deposit of $550 made on March 31 was not recorded on the bank statement. In comparing the canceled checks with those recorded on the stubs, she discovered that a check for $63 was not recorded in the checkbook. In addition, the bank had deducted $3.50 service charge. Find the corrected bank and checkbook balance.

28 Lee sells carpet for $6.80 a square yard, padding for $1.60 a square yard, and charges $1.50 a square yard for installation. At these rates, what would it cost to have a room 9 feet by 15 feet carpeted?

29 A brick building which cost $50,000 to build is estimated to depreciate at the rate of 2% per year. A wooden building costing the same amount is estimated to depreciate at the rate of $3\frac{1}{2}$% a year. At the end of 15 years, how much more should the brick building be worth than the wooden building?

30 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 in full coverage for his loss. How much more money did King receive than he had paid in premiums?

31 Foster, an appliance dealer, bought 50 radios at $18 each. He sold 23 of them at $30 each, 20 of them at $25 each, and the remainder at $22 each. What was the average amount of gross profit on each radio?

32 Jody Wells can purchase a typewriter for $328 on the installment plan. She is required to make a downpayment of 20 percent of the purchase price and to pay the balance in 20 monthly payments. What is the amount of each payment?

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

BUSINESS MATHEMATICS

June 1978

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ANSWER BOOKLET

Pupil.. Teacher..

School ....

Part II [36 credits]
Answer only 18 questions.

1................   6................   11................   16................

2................   7................   12................   17................

3................   8................   13................   14................

4................   9................   14................   19................

5................   10................   15................   20................

Part III [16 credits]

Answer only four of the five questions in this part. Be sure to write the number of the problem and the answer in the proper spaces. All work for this part must be shown in the spaces provided.

[Use this space for computation.]	[Use this space for computation.]
Problem Number:....................	Problem Number:....................
Answer:................[4]	Answer:................[4]

[Use this space for computation.]

Problem Number:.....................

Answer:................[4]

[Use this space for computation.]

Problem Number:.....................

Answer:................[4]

Part IV [30 credits]

Answer only five of the seven questions in this part. Be sure to write the number of the problem and the answer in the proper spaces. All work for this part must be shown in the spaces provided.

[Use this space for computation.]

Problem Number:.....................

Answer:................[6]

[2]

[Use this space for computation.]

Problem Number:....................

Answer:................[6]

[Use this space for computation.]

Problem Number:....................

Answer:................[6]

[3]

[Use this space for computation.]

Problem Number:...................

Answer:................[6]

[Use this space for computation.]

Problem Number:...................

Answer:................[6]

I do hereby affirm, at the close of this examination, that I had no unlawful knowledge of the questions or answers prior to the examination, and that I have neither given nor received assistance in answering any of the questions during the examination.

_____
Signature

[4]

FOR TEACHERS ONLY

SCORING KEY

BUSINESS MATHEMATICS

Friday, June 23, 1978 — 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) $317.88	(6) 32	(11) $1.12	(16) $\frac{3}{25}$
(2) 4,389	(7) $2.40	(12) $210.00	(17) $339.75
(3) 33	(8) 25%	(13) $3.40	(18) 11 km 2 hm
(4) $2.56	(9) 300	(14) $225.00	
(5) $71\frac{3}{8}$	(10) $10.00	(15) $33\frac{1}{3}$%	

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) $60.00	(11) Aug 13
(2) $3,000.00	(12) $110.70
(3) 50%	(13) $54.00
(4) $1,397.00	(14) $3.80
(5) $880.04	(15) $6,100.00
(6) $50.00	(16) $714.60
(7) 9	(17) $1.05
(8) $441.24	(18) $213.60
(9) $4,052.81	(19) $241.26
(10) $700.00	(20) 8%

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) $10.20

(22) $1,021.31

(23) $166.40

(24) $122.00

(25) $37,645.00

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) $100.89

(27) $2,442.85

(28) $148.50

(29) $11,250.00

(30) $7,912.25

(31) $8.88

(32) $13.12