REGENTS HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Friday, April 5, 1974 — 9:15 a.m. to 12:15 p.m., only

Instructions for Part I — Mental Calculation Test

Do not turn this sheet over until the signal is given.

All questions on Part I are to be worked mentally and the *answers only* placed on the back of this sheet. At the end of 15 minutes, work must stop and the answer sheet used for this part of the examination must then be immediately handed to the examiner.

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

Do not begin work on the test until your teacher tells you to do so.

All answers must be written with pen and ink.

Scrap paper may not be used, nor may computations be made on the question paper.

Part I
MENTAL 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. No written computations are allowed. [18]

1 How much is 60 increased by 20% of itself?

1.......................

2 What number is 40% of 600?

2.......................

3 What is the cost of 1,200 containers @ 33⅓¢ each?

3....$...............

4 What is the interest on $360 for 15 days at 8%?

4....$...............

5 What is the cost of 850 units at $6 per C?

5....$...............

6 What is the amount of a 4% sales tax on a refrigerator costing $260?

6....$...............

7 How is the tax rate of $.0485 per $1 expressed as a tax rate per $1,000?

7....$...............

8 If a map uses a scale of ⅛ inch equals 10 miles, how many miles would be represented by a line 1¼ inches long?

8.......................

9 What is approximately ⅕ of 793? (3,900; 160; 140; 16)

9.......................

10 When 52% is expressed as a fraction in its simplest form, it is written as (⁵²⁄₁₀₀; ²⁶⁄₅₀; ¹³⁄₅₀; ¹³⁄₂₅).

10.......................

11 When 87½% is expressed as a decimal, it is written as (87.5; 8.75; .875; .0875).

11.......................

12 What percent has the same value as .025? (.25%; 2½%; 25%; 250%)

12.......................

13 What is ⅛% of $1,600?

13....$...............

14 Notebooks may be purchased in the school store for 20¢ each. How many notebooks can be purchased for $7.00?

14.......................

15 Add: $231.50
        87.95
     320.00
      15.50

15....$...............

16 An item lists at $40 and is discounted to sell at $32. What is the percent of discount?

16.......................

17 What is the cost of 48 ounces @ $1.50 per pound?

17....$...............

18 What is the interest on $300 for 27 days at 6%?

18....$...............

The University of the State of New York

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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.

DO NOT OPEN THIS EXAMINATION BOOKLET UNTIL THE SIGNAL IS GIVEN

Part II

Answer 18 of the 20 questions in this part. Scrap paper may be used. Write only your answers in the separate answer booklet. [36]

IN RECORDING YOUR ANSWER IN THE ANSWER BOOKLET BE SURE TO USE THE CORRECT SPACE.

1 Five boxes of merchandise in an outgoing shipment weighed as follows: 42 lb.; 27¾ lb.; 18⅞ lb.; 361½ lb.; 584 lb. What was the total weight of this shipment?

2 Pencils purchased at 84 cents a dozen are sold for 10 cents each. How much profit would be gained by selling 6 dozen of these pencils?

3 What is the interest on $760 for 45 days at 9%?

4 Divide 17,186 by 2,543, and express the result to the *nearest tenth*.

5 Acker's house was damaged during a windstorm. He submitted a claim for damages of $400. The insurance company determined his loss to be $350 and paid that amount. What percent of Acker's original claim was paid by the insurance company?

6 Last year, Karen Jones made a net profit of $5,616 from her business. This amount represented a return of 13% on her original investment in the business. What amount of money did Jones originally invest?

7 An invoice for goods amounting to $235, dated January 15, had terms of 3/15, 2/30, N/60. If the invoice was paid on February 14, what would be the amount of the cash discount?

8 The following information was obtained from Barbara Land's checking account for March:

Date	Checks	Deposits	Balance
March 1			$150
March 10	$16.50		
March 15		$35.00	
March 20	15.50		
March 21	7.35		
March 31		20.00	
March 31	Ser. Chg. $.86		

What was the correct checkbook balance on April 1?

9 A person owing an invoice for $1,600 was permitted to make full payment for this debt by paying $1,552 before a certain date. What percent of cash discount was allowed?

10 Adams purchased sport jackets from a wholesaler for $38 each. At what price must he sell each sport jacket in order to make a 35% profit on the cost?

11 On January 2, 1973, Cook deposited $600 in a savings account. The interest rate was 6% compounded *semiannually*. No additional deposits and no withdrawals were made. How much money did Cook have in his savings account on January 2, 1974?

12 [Write only the number preceding the correct method.] Harriet Benton carries $45,000 in 80% co-insurance on her property, which is valued at $60,000. On a loss of $32,000, the insurance company's payment would be determined by using which procedure?

(1) $80\% \times \$45,000$

(2) $\dfrac{\$45,000}{80\% \times \$60,000} \times \$32,000$

(3) $80\% \times \$32,000$

(4) $\dfrac{\$45,000}{\$60,000} \times \$32,000$

13 Johnson has been paying the rate of $.24 per $100 for $12,000 of fire insurance on his home. His insurance agent informs him that he can obtain the same benefits, plus others, by purchasing a homeowner's extended-coverage policy for $.39 per $100. What is the difference in cost between the two policies?

14 Lewis, Wolf, and Dunn are partners in a furniture business. Their agreement states that Lewis is to receive 48% of the profits, Wolf 25%, and Dunn the remaining share. The net profit last year amounted to $18,750. What amount of money did Dunn receive as his share of the net profit?

15 An electric dryer that normally sold for $280 less 25% now sells for $199.50. What additional percent of discount is being given?

16 In the partnership of Gray, Terse, and Spire, the net profit is to be divided in proportion to the partners' investment. Gray invested $8,000; Terse, $17,000; and Spire, $39,000. What will be the amount of Gray's share if the net profit amounts to $61,200?

17 An employee is paid on a piecework basis at the rate of 18¢ for each piece completed. How many pieces would have to be completed to earn a total of $76.86?

18 Carol Johnson purchased some shares of the General Light Company's stock for $575, which included brokerage fees and taxes. If the total dividends in one year amounted to $46 on this stock, what annual percent of return did Johnson receive on her total investment?

19 It costs Mrs. Jones an average of $300 a year to heat her home. She can have her house insulated at a cost of $720. She has been told that insulation could reduce her heating expenses by 20% a year. At this rate, how many years would it take for the insulation to pay for itself?

20 Glenn's home, valued at $29,000, was assessed at 40% of its value for tax purposes. The city tax rate was $3.15 per $100 of assessed valuation. What was the amount of the tax bill?

Part III

This part consists of five groups of questions. Choose four of these five groups. Be sure to answer all questions in each group chosen. Use scrap paper for your work. Write only your answers on the separate answer sheet. [16]

Group 1

Directions (21–22): Base your answers to questions 21 and 22 on the information below.

MILLER HARDWARE COMPANY
415 Sixth Avenue
Whitestown, New York

Sold to: Allen Department Store
19 West Street
Mountainview, New York   June 19, 1973

TERMS: 2/15, 1/30, N/60   NO. 81

1 Power Lawnmower
less 25%, and 10% $180.00

21 What will be the cost of the lawnmower to the Allen Department Store if only the trade discounts are deducted? [2]

22 What single discount is equivalent to the trade discount series? [2]

Group 2

Directions (23–24): Base your answers to questions 23 and 24 on the information given below.

The following employees contribute 5.85% of their weekly wages for FICA taxes.

23 What amount was contributed for Social Security by Nicholas Race for the week of May 20, 1973, if he earned $200 that week? [2]

24 What would Elizabeth Rand's total contribution for Social Security benefits be if she earns $120 a week, each week, for the entire year of 1973? [2]

☞ GO RIGHT ON TO THE NEXT PAGE.

Group 3

Directions (25–26) : Base your answers to questions 25 and 26 on the promissory note below.

$750.00   Riverhead, New York   April 28, 19 73

Thirty days after date   I   promise to pay to the order

of   W. W. Wakeman Company

Seven hundred fifty and no/100----------------- Dollars.

Interest at   8%

Henry Scott

25 What will be the due date of the above note?   [2]

26 What will be the amount of money that Henry Scott should pay on the due date?   [2]

Group 4

Directions (27–28) : Base your answers to questions 27 and 28 on the following information.

An automobile which costs $2,950 when new is *estimated* to have a trade-in value of $550 after 6 years.

27 What is the average estimated annual amount of depreciation?   [2]

28 If the *actual* trade-in value at the end of 6 years is 12% of the original cost, what is the actual amount of the total depreciation over the 6-year period?   [2]

Group 5

Directions (29–30) : Base your answers to questions 29 and 30 on the chart below. This chart shows the rates of a personal loan company.

CASH LOAN YOU GET	AMOUNT YOU PAY BACK EACH MONTH INCLUDING ALL CHARGES							
	2 months loan	4 months loan	6 months loan	8 months loan	10 months loan	12 months loan	16 months loan	20 months loan
$20	$10.38	$5.32	$3.63	$2.79	$2.29	$1.95	$20 to $50 loaned only for 12 months or less	
30	15.56	7.97	5.45	4.18	3.43	2.92		
40	20.75	10.63	7.26	5.58	4.57	3.90		
50	25.94	13.29	9.08	6.97	5.71	4.87		
60	31.13	15.95	10.89	8.37	6.86	5.85	$4.60	$3.85
70	36.32	18.61	12.71	9.76	8.00	6.82	5.36	4.49
80	41.51	21.27	14.52	11.16	9.14	7.80	6.13	5.13
90	46.69	23.92	16.34	12.55	10.28	8.77	6.89	5.77
100	51.88	26.58	18.15	13.95	11.43	9.75	7.66	6.41
125	64.85	33.23	22.69	17.43	14.28	12.19	9.57	8.02
150	77.82	39.87	27.23	20.92	17.14	14.62	11.49	9.62

29 Linda Compton borrowed $100 to be repaid in 12 months. What is the amount of each monthly payment she must make?   [2]

30 John McCall borrowed money from the company for a period of 8 months. If each of his monthly payments is $11.16, what amount of money did he borrow?   [2]

Part IV

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

31 Stanley, a salesman, is paid a salary of $250 a month. In addition, he is paid a commission of 4% on his sales up to and including $2,000 in any one month and 5% commission on that part of his sales in excess of $2,000 in any one month. In July, Stanley's sales amounted to $7,400; and in August, $6,800. What were Stanley's total earnings for these two months?

32 Eva Booth can buy a new car for $3,165. The dealer will allow her a $1,515 trade-in allowance on her old car. Booth can finance the balance with the dealer by making 24 equal monthly payments of $78.50 or she can borrow the balance from a bank at a total cost of $192.90. What amount of money will Booth save by borrowing the money from a bank instead of financing the car with the dealer?

33 Mr. Rush had annual expenses for maintaining his $20,000 house as follows:

Real estate taxes, $520

Insurance, $48

Depreciation, 2% of the value of the house

Interest on the mortgage, $425

Other expenses, $395

What was Rush's *average monthly* cost for maintaining his house?

34 At the close of an annual business period, a merchant's books showed the following information: Sales, $113,000; Cost of the goods sold, $65,000; Operating expenses, $35,570. What was the merchant's percent of net profit based on his sales for the year?

35 On August 31, Patricia Ludlow's bank statement showed a balance of $579.63. Her checkbook balance on that same day was $435.50. A review of the bank statement showed outstanding checks for $36.50, $99.84, $37.28, and a service charge of $2.49. A cancelled check for $63 had been incorrectly entered on the checkbook stub as $36. Prepare Ludlow's bank reconciliation statement for August and indicate the correct available checkbook or bank balance.

36 The Joslyn Machine Shop operates on a regular 8-hour day with time and one-half for all time over 8 hours a day. The record of daily time worked for Louis Peters is shown below.

No. 750-21-7190		Pay end. 3/31

Name Peters, L.

Signature

	REG. TIME HRS.	OVERTIME HRS.
Monday	8	—
Tuesday	8	2
Wednesday	8	—
Thursday	7½	—
Friday	8	1

Deductions

Fed. Tax	$25.30	Total hrs.
FICA	10.30	Hourly Rate $4
Ins.	3.30	Earnings
State Tax	2.10	Total earnings _____
Hosp.	2.00	Total deductions _____
Other	1.11	Net Amount _____

What is the net amount of Mr. Peters' salary check for the week ending March 31?

37 Mr. Smith purchased 20 shares of stock at $80 per share including brokerage and other expenses. After receiving 6 quarterly dividends of $.40 per share, he sold the stock and received net proceeds of $1,580. What was his net gain from owning and selling the stock?

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BUSINESS ARITHMETIC

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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..............	18..............
4..............	9..............	14..............	19..............
5..............	10..............	15..............	20..............

Part III

Answer the questions in only four of the five groups in this part. Be sure to write in the properly numbered spaces the answers to the groups of questions you have chosen. Leave blank the spaces for the group of questions you do not choose to answer.

Group 1
21.............. [2]

22.............. [2]

Group 2
23.............. [2]

24.............. [2]

Group 3
25.............. [2]

26.............. [2]

Group 4
27.............. [2]

28.............. [2]

Group 5
29.............. [2]

30.............. [2]

[1] [OVER]

Part IV

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

[Use this space for computation.]

Problem Number: ....

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

[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]

[OVER]

Problem Number: ....

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

[4]

FOR TEACHERS ONLY

BA

SCORING KEY

BUSINESS ARITHMETIC

Friday, April 5, 1974 — 9:15 a.m. to 12:15 p.m., only

Use only *red* ink or 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 — Mental Calculation Test

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

(1) 72	(6) $10.40	(11) .875	(16) 20%
(2) 240	(7) $48.50	(12) 2½%	(17) $4.50
(3) $400	(8) 100	(13) $2.00	(18) $1.35
(4) $1.20	(9) 160	(14) 35	
(5) $51	(10) 1³⁄₂₅	(15) $654.95	

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) 1,034⅛ *or* 1,034.125	(11) $636.54
(2) $2.16	(12) 2
(3) $8.55	(13) $18.00
(4) 6.8	(14) $5,062.50
(5) 87½% *or* 87.5%	(15) 5%
(6) $43,200	(16) $7,650
(7) $4.70	(17) 427
(8) $164.79	(18) 8%
(9) 3%	(19) 12
(10) $51.30	(20) $365.40

[OVER]

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 no partial credit for any one question.]

Group 1
(21) $121.50   [2]

(22) 32.5% *or* 32½%   [2]

Group 2
(23) $11.70   [2]

(24) $365.04   [2]

Group 3
(25) May 28   [2]

(26) $755   [2]

Group 4
(27) $400   [2]

(28) $2,596   [2]

Group 5
(29) $9.75   [2]

(30) $80   [2]

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.*]

(31) $1,170

(32) $41.10

(33) $149

(34) 11%

(35) $406.01

(36) $131.89

(37) $28

DO YOU KNOW —

. . . that you can help prepare Regents examinations? You can do so by completing the Regents Examination Evaluation Form that is enclosed in each Regents examination envelope.

Classroom teachers returned almost 5,000 Regents Examination Evaluation Forms to the Education Department following last June's Regents examinations. Their comments were carefully reviewed by the Department subject-matter and testing specialists and the committees of teachers who prepared this year's examinations.

Remember, your comments are important! Be sure to complete the Evaluation Form and give it to your principal for return in the Regents box.