

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

Tuesday, June 21, 1983 — 1:15 to 4:15 p.m., only

This test packet contains three separate booklets:

- (1) the examination booklet for Part I
- (2) the examination booklet for Parts II, III, and IV
- (3) the answer booklet for Parts II, III, and IV

Remove the booklet for Part I, the Rapid Calculation Test, and then put the other two booklets aside.

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. (Note: All answers containing fractions must be reduced to lowest terms.)

All answers must be written with blue or black pen.

Be sure to write your name in the space below.

Student.....

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

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

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. All answers containing fractions must be reduced to *lowest* terms. [18]

1 Add:
$$\begin{array}{r} 7.64 \\ 15.231 \\ 3.4 \\ 2.12 \\ \underline{1.106} \end{array}$$

1

2 Subtract:
$$\begin{array}{r} 114,342 \\ \underline{-86,719} \end{array}$$

2

3 Multiply:
$$\begin{array}{r} 74.82 \\ \underline{3.5} \end{array}$$

3

4 Divide: $122.12 \div 8.6$

4

5 Add:
$$\begin{array}{r} 13\frac{3}{4} \\ 6\frac{1}{2} \\ 8\frac{5}{6} \\ \underline{3\frac{2}{3}} \end{array}$$

5

6 Subtract:
$$\begin{array}{r} 872\frac{1}{8} \\ \underline{-26\frac{1}{3}} \end{array}$$

6

7 What is $16 \times 4\frac{1}{8}$?

7

8 Divide $\frac{3}{4}$ by $\frac{4}{5}$.

8

- 9 If 1.5 square meters is allowed for each typist in an office, how many square meters must be allowed for 20 typists? 9
- 10 At \$2.50 a gallon, what is the cost of 32 quarts? 10..\$
- 11 Reduce $\frac{49}{84}$ to *lowest terms*. 11
- 12 What is the exact number of days from September 13 to November 15? 12
- 13 Find the cost of 625 bottles at \$3 per C. 13..\$
- 14 Express $\frac{5}{8}$ as a decimal. 14
- 15 What is the amount of interest on \$450 for 1 year at $10\frac{1}{2}\%$? 15..\$
- 16 What number is 130% of 40? 16
- 17 What number is 18% more than 350? 17
- 18 Change $\frac{7}{15}$ to a decimal, rounded to two decimal places. 18
-

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Parts II, III, and IV

The answers to the questions in Parts II, III, and IV of this examination are to be written in the separate answer booklet, which is inside this examination booklet. Open the examination booklet, remove the answer booklet, and then close the examination 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.

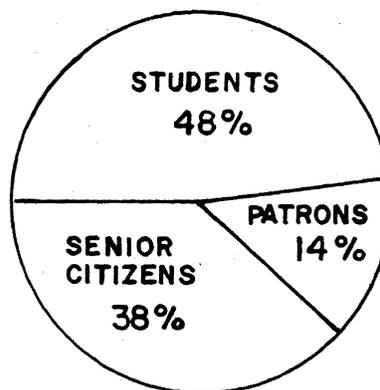
DO NOT OPEN THIS EXAMINATION BOOKLET UNTIL THE SIGNAL IS GIVEN

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 retailer had sales of \$44,000 for the month. If his cost of goods sold was \$15,000, what was his gross profit for the month?
- 2 Ryan Furniture sells a \$200 chair at a price of \$140. What is the percent of discount on this transaction?
- 3 An automobile shop buys wheel covers at \$90 a set, less a trade discount of 15%. What is the shop's cost for the set?
- 4 If a 6-pack of soda costs \$1.19, what should be the minimum selling price per bottle to cover the original cost (to the nearest whole cent)?
- 5 On the price tag of each article, Walter's Variety Discount Store marks the cost price in code. The name of the manager's wife, KAREN CUYBO, is used for the numbers 1 through 0. The tag on a certain blanket is marked with the code ARBN. If the blanket is sold for \$38.49, what is the store's gross profit on the sale?
- 6 By buying 100 items or more at a time, a merchant receives a 2% quantity discount on items which are normally priced at 98 cents each. How much does she save each time she buys 100 at a time?
- 7 A large machine in a factory cost \$8,000 when new. It is estimated to depreciate \$400 per year. What is the annual rate of depreciation?
- 8 An invoice dated June 10 has terms of 3/10, 1/30, n/60. By what date must the invoice be paid to deduct the cash discount of 1%?
- 9 Olson bought a garden tractor for \$1,791.20 on an installment plan. He made a downpayment of \$536 and paid the balance with 12 equal regular payments. What was the amount of each payment?
- 10 Roberts budgets \$55.00 a week for automotive expenses. During the past 3 weeks he spent \$49.74, \$62.17, and \$53.40. What is the most he can spend this week and stay within his budget for this 4-week period?

- 11 What is the total cost of mailing 8,350 catalogs, one per envelope, if it costs 3 cents for each envelope, 32 cents postage for each catalog, and the total labor cost for mailing all catalogs is \$58.75?
- 12 Ticket sales for the community theater group are shown in the chart below. If total sales are \$18,000, how many dollars came from sales to patrons?



- 13 Malone and Johnson are partners in a beauty salon. They agree to share the net profit in the ratio of 3 to 4, respectively. What is Johnson's share if the net profit for 1982 was \$14,000?
- 14 A bankrupt business can pay 42% of its outstanding debts. How much money will be paid to a creditor whose claim amounts to \$860?
- 15 Murphy's wages are paid monthly, but starting the first of the year they will be paid weekly. If he receives \$975 per month, what will be his weekly wages?
- 16 Bianco, who works an 8-hour day, has been receiving \$5.60 per hour. How much per hour will he receive if his workday is reduced to 7 hours and his daily wage remains the same?
- 17 Last year, Wolack had the following income: salary, \$14,500; rental income, \$110; income from tips, \$90. She claimed the following deductions: contributions, \$250; real estate taxes, \$800; interest on mortgage, \$580; membership dues in professional association, \$25. Find her taxable income for the year before exemptions.

18 Cornell owns a house and lot assessed at \$7,100. The school tax rate in his community this year is \$4.85 per \$100. What is the amount of Cornell's school tax this year?

19 An automobile sells for \$6,420 plus a \$200 preparation fee. If the sales tax is 7% on all charges, what is the total cost of this automobile?

20 What is the annual premium on a \$4,000 property insurance policy if the rate is \$45 per thousand?

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 In the manufacture of 200 kitchen racks, the factory costs were as follows: materials, \$552.70; labor, \$2,022.80; overhead, \$224.50. What is the average factory cost of each rack?

22 McCarthy placed an order for 20 dozen saws. If the wholesale price of the saws is \$40 a dozen, less 22%, what amount will he pay for the saws?

23 Wilson purchased equipment for \$59,500, paying a 25% downpayment and paying 9% interest on the balance. How much will Wilson pay in interest for the first year?

24 An automobile can be rented for \$8.95 a day plus 15 cents a mile. What is the total cost of renting the car for 22 days and 1,895 miles?

25 Rait, a landlord, received rental income of \$325 per month from his apartment. His expenses for the year were \$1,100 for taxes, \$200 for insurance, and \$450 for repairs. What was his net income for the year from this rental property?

 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 A used car dealer offers a car for \$7,140 cash or on the installment plan by paying \$1,500 down and the balance in 45 monthly payments of \$150 each. By how many dollars does the installment plan exceed the cash plan?
- 27 Ace Supply Co. offers a television set for \$650 less discounts of 20% and 10%. King Electronics offers the same set for \$650 and a discount of 30%. What is the amount of difference between the two discounts?
- 28 On November 30, Grasso's checkbook balance was \$642.30. On the same date, her bank statement showed a balance of \$984.30. Upon comparing the bank statement with the checkbook, she discovered the following: checks were outstanding for \$38.04, \$186.50, and \$148.75; a deposit of \$58.60 which was mailed on November 29 had not yet been recorded by the bank; a check which she had written for \$82.50 had not been recorded in her checkbook; a deposit of \$113.01 had not been recorded in her checkbook; and a service charge of \$3.20 had been made by the bank for the month of November. What was Grasso's correct available checkbook balance as of November 30?
- 29 Ryan is employed at Webster Electric Company, which pays on a piecework basis for each acceptable antenna completed. Last week, Ryan completed the following number of antennas: Monday, 81; Tuesday, 66; Wednesday, 71; Thursday, 62; Friday, 68. Sixteen antennas were not accepted. Ryan is paid according to the following schedule:
- First 200 acceptable antennas at 55 cents each
Each acceptable antenna over 200 at 60 cents each
- What were Ryan's gross earnings for the week?
- 30 Haight and Levine, partners in an office machines business, have invested \$48,000 and \$32,000, respectively. They agree to pay each partner 8% return on his investment and to divide the remainder of the profits equally. Find Haight's share if their net income was \$24,800.
- 31 Diaz insured his factory for \$6,000 with the Security Insurance Company, for \$8,000 with the Reliable Insurance Company, and for \$14,000 with the Safety Insurance Company. A fire loss of \$20,580 occurred. What amount of money should Diaz collect from the Reliable Insurance Company?
- 32 Richards purchased 100 shares of stock at a total cost of \$3,800. She kept the stock for 3 years, during which time she received semiannual dividends of \$2.10 per share. She then sold the 100 shares and received net proceeds of \$3,950. What was Richards' net gain from owning and selling the stock?

FOR TEACHERS ONLY

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SCORING KEY

BUSINESS MATHEMATICS

Tuesday, June 21, 1983 — 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) 29.497 | (6) $845\frac{19}{24}$ | (11) $\frac{7}{12}$ | (16) 52 |
| (2) 27,623 | (7) 66 | (12) 63 | (17) 413 |
| (3) 261.87 | (8) $\frac{15}{16}$ | (13) \$18.75 | (18) .47 |
| (4) 14.2 | (9) 30 or 30 m ² | (14) .625 | |
| (5) $32\frac{3}{4}$ | (10) \$20 | (15) \$47.25 | |

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) \$29,000 | (6) \$1.96 | (11) \$2,981.25 | (16) \$6.40 |
| (2) 30% | (7) 5% | (12) \$2,520 | (17) \$13,045 |
| (3) \$76.50 | (8) July 10 | (13) \$8,000 | (18) \$344.35 |
| (4) \$.20 or 20¢ | (9) \$104.60 | (14) \$361.20 | (19) \$7,083.40 |
| (5) \$14.54 | (10) \$54.69 | (15) \$225 | (20) \$180 |

[OVER]

BUSINESS MATHEMATICS — *concluded*

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 *Guide for Rating Regents Examinations and Competency Tests in Business Subjects* (1974 edition) as recorded under Part IV.]

| | | |
|------------|-----------------|--------------|
| (21) \$14 | (23) \$4,016.25 | (25) \$2,150 |
| (22) \$624 | (24) \$481.15 | |

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 *Guide for Rating Regents Examinations and Competency Tests in Business Subjects* (1974 edition).]

| | | |
|---------------|---------------|--------------|
| (26) \$1,110 | (29) \$189.20 | (31) \$5,880 |
| (27) \$13 | (30) \$13,040 | (32) \$1,410 |
| (28) \$669.61 | | |