The University of the State of New York

322ND HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Wednesday, August 25, 1954 — 8.30 to 11.30 a. m., only

Fill in the following lines:

Name of pupil..Name of school..

Instructions for Part I

Do not open this sheet until the signal is given.

All parts of the rapid calculation test are to be worked mentally and the *answers only* placed on the question paper. At the end of 15 minutes, work must stop and the sheet used for this part of the examination must then be detached from the rest of the question paper and immediately handed to the examiner.

All answers must be written with pen and ink.

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

RAPID CALCULATION TEST

1–2 *a* Make the following extensions: [5]

160 bushels at 25¢ per bushel = $———

480 gallons at $16\frac{2}{3}$¢ per gallon = $———

40 bushels at 45¢ per bushel = $———

250 pounds at $2 per cwt. = $———

180 feet at 10¢ per yard = $———

b Compute the interest: [5]

$350 for 60 days at 3 % = $———

$2400 for 30 days at 2 % = $———

$15 for 280 days at 6 % = $———

$3876 for   6 days at 6 % = $———

$1600 for 30 days at $1\frac{1}{2}$% = $———

c Complete each of the following statements: [6]

$\frac{1}{4}$% of $360 is $..............

482.6 multiplied by 100 is ....

$12\frac{1}{2}$% more than 72 is ....

If an article costing $36 is sold for $48, the per cent of gain based on the selling price is ....%.

17.87% expressed as a decimal to the *nearest thousandth* is ....

150% of 90 is ....

d Complete the following table of library book purchases: [No partial credit.] [4]

Type of Book	1952	1953	Total
Fiction	284	336	
Biography	139	175	
Poetry	104	116	
Total			

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Write at top of first page of answer paper (a) names of schools where you have studied, (b) number of weeks and recitations a week in business arithmetic previous to entering summer high school, (c) number of recitations in this subject attended in summer high school of 1954 or number and length in minutes of lessons taken in the summer of 1954 under a tutor licensed in the subject and supervised by the principal of the school you last attended.

The time requirement is four or five recitations a week for a school year. The summer school session in business arithmetic will be considered the equivalent of one semester's work during the regular session (four or five recitations a week for half a school year).

For those pupils who have met the time requirement the minimum passing mark is 65 credits; for all others 75 credits.

For admission to this examination attendance on at least 30 recitations in this subject in a registered summer high school in 1954 or an equivalent program of tutoring approved in advance by the Department is required.

Answer questions 1–2 in Part I, four questions from Part II, four questions from Part III and four questions from Part IV. Unless otherwise stated, all operations except mental ones are to be shown written in ink. Practical business methods must be used in solutions.

Part I, 1–2 Rapid calculation test on attached sheet. [20]

Part II

Answer any four questions from this part.

3 Answer all parts of this question. [Two credits for each correct answer; no partial credit. ALL WORK MUST BE SHOWN.] [10]

   a William earned $285 for his summer work in 1952, and $253.65 for his summer work in 1953. What was the per cent of decrease in his earnings?

   b In drawing up a set of floor plans, an architect used a scale of $\frac{1}{8}$ of an inch to one foot. How long a line would he draw on these plans to indicate a wall 24 feet long?

   c What single per cent of discount is equal to a series of 25% and 20%?

   d A refrigerator that cost $240 when new was worth $144 six years later. What was the average annual depreciation on this refrigerator?

   e Carter started on an automobile trip at 7.45 a. m. and arrived at his destination at 3.15 p. m. If he spent one hour and fifteen minutes for eating lunch, buying gasoline, etc., how much time did he spend in actual travel?

4 Answer all parts of this question. [This an accuracy test. One credit for each correct answer; no partial credit; no credit allowed unless work is shown. Wherever necessary, reduce the answer to simplest form.] [10]

   a Add: 228.62; 34.807; 156.9; 86.91

   b Subtract 37.064 from 192.371

   c Divide 99.84 by 3.9

   d Multiply 28.03 by 17.5

   e Multiply $32\frac{1}{4}$ by $9\frac{1}{8}$

   f Add: $9\frac{1}{3}$; $16\frac{5}{9}$; $3\frac{1}{6}$; $5\frac{1}{2}$

   g Subtract $7\frac{5}{8}$ from $16\frac{1}{2}$

   h Divide $106\frac{1}{3}$ by $5\frac{1}{2}$

   i Express $\frac{5}{7}$ as a decimal correct to the *nearest hundredth*.

   j Change 3 yd. 2 ft. 5 in. to inches.

[3]

5 Fallon's net taxable income on his New York State income-tax return for a recent year amounted to $6750 after he had deducted all exemptions. This income was taxed at a rate of 2% on the first $1000, 3% on the next $2000 or any fraction thereof, 4% on the next $2000 or any fraction thereof, and 5% on the next $2000 or any fraction thereof. What was the total amount of Fallon's New York State income tax for that year? [10]*

6 Using the title and information given below, prepare a line graph showing the facts: [To the teacher: Deduct *one* credit for each error or omission.] [10]

DAILY LUNCH COUNTER SALES

June 20, 1954–June 26, 1954

Sunday	$370
Monday	280
Tuesday	260
Wednesday	290
Thursday	330
Friday	350
Saturday	410

7 On July 21, 1954, Elwell discounted at his bank a customer's two-month promissory note dated June 10, 1954. The face of this note was $360, and it bore interest at the rate of 5% per year. The bank charged Elwell 6% discount. What amount of money did Elwell receive as net proceeds from discounting this note? [10]*

Part III
Answer any four questions from this part.

8 Hadley, a bankrupt, owed debts as follows:

XYZ Corporation	$30,225
Bates Brothers	11,625
Carter & Company	4,650

The net cash available to these creditors was $19,530. What amount of money would have been paid to the XYZ Corporation? [6]*

9 Johnston and Dyer are members of a partnership, with investments of $40,000 and $25,000 respectively. The partnership agreement provides that all profits are to be divided as follows:
Each partner is to receive 6% annually on his investment.
All remaining profit is to be divided equally.
Last year the firm made a net profit of $17,250. What is the amount of each partner's share of this net profit? [6]*

10 Mitchell bought some stock at a total cost price of $77 per share, including brokerage and other expenses. He received an annual dividend of 5% based on a par value of $100 per share. What actual per cent of return did Mitchell receive on his investment, to the *nearest tenth of a per cent?* [6]*

11 Barnes insured his office building for $35,000. The annual rate of this insurance was 34¢ per $100. A three-year policy could have been bought for 2½ times as much as a one-year policy. What amount of money would Barnes have saved by buying a three-year policy instead of three separate one-year policies? [6]*

12 Hopkins paid $50.85 for a suitcase. This price included a 3% retail sales tax and a 10% federal tax, both based on the original marked price. What was the original marked price of this suitcase? [6]*

[4] [OVER]

Part IV

Answer any four questions from this part.

13 Barker sold merchandise through a commission merchant for $3850. The merchant charged a commission fee of 6%. Other expenses incurred in connection with this transaction totaled $78.50. What amount of money was returned to Barker by the merchant as net proceeds for this sale? [4]*

14 Evans is employed on a 40-hour-per-week basis at an hourly rate of $1.50 with time-and-a-half for overtime. During a recent week he worked 44 hours. Total deductions from his earnings amounted to $11.50. What amount of money did Evans receive as " take-home " pay? [4]*

15 On July 1, Gaffney's electric meter read 5429 kilowatt-hours. A month later it read 5546 kilowatt-hours. Gaffney was charged 5¢ per kilowatt-hour used. What was the total amount of his electricity bill for the month? [4]*

16 On July 2, Hubert's checkbook balance was $814.83. The statement he received from his bank on that date showed a balance of $928.54. Checks outstanding were: ♯ 35 for $75.21; ♯ 38 for $16.50; ♯ 39 for $25.00. Further comparison of the checkbook with the statement showed that a service charge of $3.00 had been deducted by the bank. Prepare a reconciliation statement and indicate the correct available checkbook or bank balance. [4]*

17 On June 1, 1953, Waite deposited $5000 in a savings bank account that paid 2% interest per year. This interest was added to Waite's account every six months. If Waite made no additional deposits and no withdrawals during the year following the date of his first deposit, what amount of money did his bank account earn for him during that year? [4]*

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* [*To the teacher:* One-half the number of credits should be deducted for each different error in method. No credit should be allowed for a solution that contains an error in method and an error in computation.]