The University of the State of New York

328TH HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Wednesday, August 22, 1956 — 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* Subtract: [2]

965
23⅞

b Make the following extensions: [5]

240 pounds at 16⅔¢ per pound = $————
160 bushels at $1.50 per bushel = $————
120 articles at 12½¢ each = $————
40 pounds at 60¢ per pound = $————
3000 pounds at $12 per ton = $————

c Compute the interest: [5]

$3050 for 6 days at 6% = $————
$1800 for 30 days at 6% = $————
$1000 for 2 months at 4½% = $————
$360 for 60 days at 2% = $————
$600 for 36 days at 6% = $————

d Complete *each* of the following statements: [4]

15.460 multiplied by 100 is ————.

¼% of $800 is ————.

If an article costing $60 is sold for $40, the per cent of loss based on the cost is ————.

78.63% expressed as a decimal to the *nearest hundredth* is ————.

e Complete the following table of school enrollment: [No partial credit.] [4]

School	Boys	Girls	Totals
School No. 1	486	519	
School No. 2	314	306	
Wilson High School	375	412	
Totals			

[2]

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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 1956.

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 1956 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. All work must be shown.

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

a An invoice dated May 12 has terms of $^2/_{10}$, $^N/_{60}$. What is the last possible date on which this invoice may be paid in order that the cash discount may be obtained?

b A two-month promissory note for $650 bears interest at 4%. What will be the value of this note on its due date?

c In 1954, Matt's income from his investments amounted to $3650. In 1955 the income from these investments amounted to $4124.50. By what per cent did his earnings from investments increase?

d What single per cent of discount is equal to a series of discounts of 20% and 10%?

e On a line graph showing sales made, a one-inch line represents $250. How many inches long would a line need to be in order to represent $1750?

4 Answer all parts of this question.   [This is 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 Multiply   265.1 by 10.4

b Add $5\frac{1}{4}$; $3\frac{1}{3}$; $18\frac{1}{2}$; $9\frac{5}{6}$

c Subtract   832.72 from 971.317

d Divide   252.96 by 6.8

e Multiply $56\frac{1}{3}$ by $9\frac{1}{8}$

f Divide $17\frac{2}{3}$ by $2\frac{3}{4}$

g Express $\dfrac{12}{25}$ as a per cent.

h Express $\frac{2}{7}$ as a decimal correct *to the nearest hundredth.*

i Express .250 as a common fraction in lowest terms.

j Change 4 yards, 1 foot, 9 inches to inches.

[3]

5 Alan Roth, a shopkeeper, bought 150 suits at $52 each, less 15% discount. He sold 75 of these suits at $65 each, 40 at $55 each and the remainder at $45 each. His operating expenses in connection with this transaction amounted to 10% of his total sales. What average net profit per suit did Roth gain on the entire transaction?   [10]

6 On June 1, 1956, Ralph Blair's bank statement showed a balance of $562.50. His checkbook balance was $653.63. Checks outstanding were: $11.50; $129.28; $37.84. A deposit of $267.75, which had been properly recorded in the checkbook, had been received by the bank too late to be entered on the statement. Along with the canceled checks, Blair found a service-charge slip for $2.00. Prepare a reconciliation statement and indicate the correct available checkbook or bank balance.   [10]

7 Johnson & Statz are partners in a clothing business, with investments of $25,000 and $15,000, respectively. Last year the firm made a net profit of $9440.

  a If the profits were divided equally, how much would Johnson receive?   [2]
  b If the profits and losses were divided in proportion to the partners' investments, how much would Johnson receive?   [4]
  c If each man was allowed 6% on his investment and the remaining profit was divided equally, how much would Johnson receive?   [4]

Part III

Answer any four questions from this part. All work must be shown.

8 Johnson sold merchandise for $3750 through a commission merchant. The agent's commission was 6%. Other expenses connected with the sale were as follows: freight $32.50; miscellaneous expenses $6.25; storage $16.75. What amount of money did Johnson receive as net proceeds from this sale?   [6]

9 Mackin insured his building for $15,000 at an annual rate of 19¢ per $100. If a 3-year policy costs $2\frac{1}{2}$ times as much as a 1-year policy, what amount would Mackin have saved by buying a 3-year policy instead of three separate 1-year policies?   [6]

10 A storekeeper buys television sets for $225 less 20% and 10%. The freight charges on each set average $2. At what price must the dealer sell each set in order to make a gross profit of 20% of the selling price?   [6]

11 Hayes can buy a display case for his store from the Zeta Company for $1450 less 10% and 10%. The Atlas Company offers him the same type of equipment for $1700 less 30%, terms $^2/_{10}$, $^N/_{60}$. If Hayes is prepared to pay cash when he buys this equipment, how much will he save by accepting the better of the two offers?   [6]

12 The total amount of money needed to operate a certain town this year is $750,500. Of this amount, $15,360 will be received from licenses and state aid. The remainder must be raised by real estate taxes. The total assessed valuation of all taxable real estate in the city is $20,650,000. What tax rate, expressed in dollars per $1000 of assessed value, should be levied in order to raise the necessary funds?   [6]

[4]   [OVER]

Part IV

Answer any four questions from this part. All work must be shown.

13 Helen Royce, a salesgirl, receives a weekly salary of $40. In addition she is paid a commission of 5% on that part of her weekly sales in excess of $500. During two consecutive weeks her total sales were $475 and $602, respectively. What were Helen's total earnings for the 2-week period? [4]

14 Cole started on an automobile trip at 8:45 a.m. and reached his destination at 4:30 p.m. He spent 45 minutes for lunch and 15 minutes in buying gasoline and oil. What was his actual driving time for this trip? [4]

15 On June 30, 1955, Joseph deposited $4500 in a savings bank. The bank pays interest at the rate of 3% per year, adding the interest to the depositors' accounts on June 30 and December 31. How much will Joseph have on deposit on July 1, 1956? [4]

16 Smith can buy a used automobile on the installment plan for a total cost of $700. If he pays 40% of the cost as a down payment and the balance in 12 equal monthly payments, what will be the amount of each monthly payment? [4]

17 David is employed on a 40-hour-per-week basis, with time and a half for all overtime. His regular pay rate is $1.40 per hour. Last week he worked 46 hours. Total deductions from his pay amounted to $15.43. What amount of money did David receive as take-home pay for the week, after all deductions had been made? [4]