The University of the State of New York

285TH HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Friday, August 21, 1942 — 8.30 to 11.30 a. m., only

Fill in the following lines:

Name of pupil.....Name of school.....

Instructions

Do not open this sheet until the signal is given.

All parts of the rapid calculation test are to be worked mentally and the results 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 work must be done with pen and ink.

RAPID CALCULATION TEST

1–2 *a* Complete the following summary of sales: [5]

	Dept. A	Dept. B	Total
Monday	96	114	
Tuesday	142	85	
Wednesday	86	96	
Thursday	158	124	
Friday	164	88	
Saturday	86	65	
Total			

b Find the interest on *each* of the following: [5]

$138 for 80 days at 6 % =

$300 for 30 days at 4 % =

$288 for 15 days at 6 % =

$160 for 2 months at 4½% =

$180 for 10 days at 5 % =

c Make the extensions: [5]

75 articles @ $ .60 =

248 " @ $ .37½ =

300 " @ $1.12½ =

160 " @ $1.25 =

120 " @ 2½¢ =

d Underline the correct answer for *each* of the following: [5]

1.5 divided by 30 equals (5; 50; .5; .05)

.0625 expressed as per cent is (625%; 62½%; 6¼%)

28 increased by ¼ of itself is (7; 14; 21; 35)

48 is ⅓ larger than (16; 32; 36; 64)

⅕% of $600 is ($.12; $1.20; $12; $120)

BUSINESS ARITHMETIC

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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 1942.

The minimum time requirement is 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 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 1942 is required.

Answer questions 1–2 and eight of the others. Unless otherwise stated all operations except mental ones are to be shown. Practical business methods must be used in solutions.

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

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

a While attending school, James worked after school and Saturdays for 38 weeks. He earned $83.60. What were his average weekly earnings?

b Find the single discount that is equivalent to the series 20%, $16\frac{2}{3}$% and 10%.

c A two-months note dated April 22 was discounted 30 days later. For how much time did the bank charge discount?

d What is the difference between $\frac{1}{2}$ of $50 and $\frac{1}{2}$% of $50?

e A man sold a house for $3640, thereby sustaining a loss of $12\frac{1}{2}$% of the cost. How much had he paid for the house?

4 On March 2, 1942, Luther Brown submitted the following facts on his State income tax blank: salary $4500; commissions $350; bonus $250; interest from bank deposits and bonds $685; dividends from stock $530. He claimed the following deductions: taxes on his house $342; interest on mortgage $300; contributions for religious and charitable purposes $125.

Mr Brown is a married man with three minor children. He is allowed an exemption of $2500 as head of a household and $400 for each dependent child. The rate is 2% on the first taxable $1000 and 3% on the next $2000 or fraction thereof.

On March 17, Governor Lehman signed a legislative bill that ordered a 25% deduction in the State income taxes.

a What was the amount of the check that Johnson sent to the tax commission on March 2? [8]

b What will be the amount of his refund from the State? [1]

c What will be the actual amount of his tax? [1]

5 A clerk in a post office had to weigh 13 packages to be sent to the third zone and determine the postage on them. Each package weighed 4 lb. 3 oz. and was to be insured for $25. The rate for the third zone is 9¢ for the first pound or fraction thereof and 2¢ for each additional pound or fraction thereof. The insurance fee is 10¢ for a package valued at $25. Find the total amount required to mail and insure the packages. [No credit unless answer is correct.] [10]

6 On August 1, the bank statement of Brown & Rowan showed a balance of $1486.73. The checkbook balance was $1324.57.

The bookkeeper discovered he had recorded a check for $136.84 as $163.84. The bank had deducted 28¢ for a service charge. The checkbook showed a deposit of $45 that was mailed on July 31 but had not been received at the bank when the statement was made. The following checks were outstanding: $80.44, $63.06, $36.94.

a Reconcile the balances. [8]

b On the statement you have prepared, indicate the correct checkbook balance. [2]

7 Three companies underwrote the fire insurance on a building valued at $30,000. Traders carried $14,000; Mutual $10,000; National $6000.

a How much should *each* company pay on a fire loss of $9660? [5]

b Why did the owner insure in three companies rather than in one company only? [1]

c If the owner had had standard New York State policies containing the 80% coinsurance clause and had been insured for only $20,000, what is the total amount that should have been received from the insurance companies? [4]

8 A merchant buys goods listed at $1200 with the option of 40% discount for cash or successive discounts of 25%, 10% and 5% and 60 days' credit. How much would he gain if he borrowed the money at 6% to take advantage of the cash discount? [10]

9 Your father needs $125. A loan company will lend him the money, which he may repay in $25 monthly instalments plus interest on the unpaid balance. Interest rates are 2½% a month on that part of the loan which does not exceed $100 and 2% on that part of the loan which exceeds $100. A bank would permit him to repay the loan in five monthly instalments of $26.25.

a How much interest would he have to pay the loan company? [6]

b How much would the bank charge for the loan? [2]

c How much would he save by borrowing from the bank? [2]

10 Jordan has been paying a flat water rate of $20 per year. If he had a meter installed, he could pay at the rate of 20¢ per 1000 gallons. There are four adults in Jordan's family. The rate of usage is calculated at 25 gallons a day for each adult. It will cost $28 to install the meter and it is estimated that it will last for 14 years.

a Find the average amount of Jordan's tax bill for water, if metered. [6]

b Is the flat rate or the metered rate more economical? [1]

c How much more economical? [3]

11 A 1942 graduating class of 45 members decided to purchase a Series F war bond costing $74 and give it to the school to hold until 1954, when it is to be awarded to the honor pupil of that year.

They earned money by selling the following:

556 magazines at an average profit of 3¢ each
706 magazines at an average profit of 2½¢ each
440 emblems at an average profit of 4⅞¢ each
938 candy bars at an average profit of 1¾¢ each

The remaining required amount was raised by assessing each member. How much was the assessment? [10]

12 A man bought an automobile for $1440 and sold it for $1656.

a What per cent of the selling price was gained? [5]

b What per cent of the cost was gained? [5]